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The

Merchant Marine Council of the United States Coast Guard

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For each meeting two District Commanders and three Marine Inspection Officers are designated as meembers by the Commandant.

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COUNCIL ACTIVITIES

The Merchant Marine Council will hold a public bearing in Room 8205, Coast Guard Headquarters, Thirteenth and E Streets NW., Washington, D. C., on March 26, 27, and 28, 1947. The meetings will convene at 9:30 a.m. and the Council will receive and consider comments on proposed changes in regulations applicable to vessels subject to inspection and other vessels. The tentative agenda for this hearing is as follows:

March 26—Marine Engineering Regulations and Material Specifications: Welding electrodes; specifications.

March 27—Casualty and accident investigations.
Suspension and revocation proceedings.

Great Lakes Pilot Rules. Dangerous cargo. Terminations of approval of equipment (York-Shipley boilers).

March 28—Use of liquefied petroleum gases on vessels other than passenger vessels.

The proposed changes in the regulations are described generally in the following paragraphs. Comments may be submitted in writing prior to the public hearing, or orally, or in writing at the hearing. All comments received are made a part of the record and will be considered before recommending any changes to the Commandant.

The "Marine Engineering Regulations and Material Specifications" are being revised and brought up to date so that the next edition of the regulations and specifications will reflect the experiences gained through wartime operations. In general, the changes to be considered are intended to clarify the existing regulations, effect editorial changes, and bring the regulations into closer agreement with the requirements of the American Bureau of Shipping and the boiler and unfired pressure vessel codes of the American Society of Mechanical Engineers and American Society for Testing Materials as well as to incorporate numerous recommendations proposed by boiler manufacturers, marine engineers, and others. amendments to the regulations will be made effective 90 days after they are published in the Federal Register.

The material specifications in part 51 of the Marine Engineering Regulations (46 CFR, subch. F) have been revised and brought up to date and to these have been added three new specifications on carbon steel bolting material, copper alloy plate and flange fire-box steel plates. The specifications which are revised and brought into substantial agreement with either the standards of the American Society for Testing Materials or the American Society of Mechanical Engineers specifications are as follows:

Marine bollers steel plate (46 CFR 51.2).

Steel bars and shapes (46 CFR 51.5).

Lap-welded and seamless steel and lap-welded boiler tubes (46 CFR 51.9).

Electric resistance welded steel and open hearth iron boiler tubes (46 CFR 51.9a). Seamless steel and alloy steel boiler tubes (46 CFR 51.10).

Seamless steel pipe (46 CFR 51.11). Welded and seamless steel pipe (46 CFR 51.11a).

Electric resistance welded steel pipe (46 CFR 51.11b).

Welded wrought fron pipe (46 CFR 51.12)

Seamless brass pipe (46 CFR 51.13). Seamless copper pipe (46 CFR 51.14).

Steel forgings (46 CFR 51.15).

Alloy steel bolting material (46 CFR 51.16).

Carbon and alloy steel nuts (46 CFR 51.16a).

Steel castings (46 CFR 51.17).

Malleable iron castings (46 CFR 51.19).

Bronze castings (46 CFR 51.20).

The other material changes in the regulations regarding specifications materials deal with tension tests in section 51.1-7. The revision changes the speed of the cross head of the testing machine to conform with American Iron and Steel Institute and standard United States Navy practices. This change will permit any convenient speed of the crosshead from start of loading until onehalf of the yield point is reached wherever the speed is not specifically called for by Coast Guard specifications. In cases not covered by the Coast Guard specifications, then the American Society for Testing Materials applicable standard will apply. A clarification of section 51.1-13 (a) on stamping plates and specimens is recommended by proposing that the required marking apply only to class A materials.

The Marine Engineering Regulations regarding construction of boilers and pressure vessels were also reviewed and certain recommended changes proposed. In the definition for "pressure vessel" in section 52.1-1 (d), it is proposed to delete references to pressure and diameter. The present regulation conflicts with requirements specified in part 56 relating to fabrication.

The formula for calculating flathead thicknesses as given in section 52.5-3 entited, "Computation of Pressure Vessel Heads," does not agree exactly with the formula followed by the American Society of Mechanical Engineers in paragraph U-39, Unfired Pressure Vessel Code. It is proposed to change the formula to agree with the one used by the American Society of Mechanical Engineers. The values of C used in the calculation for flathead are listed according to the type of flatheads used. No new requirements or other changes in the present regulations are proposed.

The regulations regarding design, construction, marking, and approval of safety valves and the construction of relief valves are being revised so that the regulations will agree with the rules of the American Society of Mechanical Engineers boiler code and include several recommendations made by industry (46 CFR 52.14). The proposed additional requirements will cover the determination of coefficients of discharge and relieving capacities of safety valves established by tests conducted by the United States Navy, National Board of Boiler and Pressure Vessels Inspectors, or other acceptable testing agency. It is proposed for new safety valves to limit the inlet size to 4 inches diameler. As suggested by industry adjustment for blow-down will vary slightly from the American Society of Mechanical Engineers boiler code requirements, but otherwise will be in substantial agreement with this code. The major safety valve manufacturers bave indicated concurrence with the proposed amendments.

A recommendation for check valves to be installed between the economizer and steam drum to prevent the release of boiler water and subsequent boiler damage in the event of econcmizer failure is being suggested as an amendment to section 52.15-6 entitled, "Feed Valves." As suggested by industry and as required by the American Society of Mechanical Engineers boiler code, it is also proposed to include a requirement for the fitting of sleeves in the feed water inlet nozzles to prevent cracking of welds and plates due to metal temperature differential. The proposed revision also includes details for unit feed systems as required by the rules of the American Bureau of Shipping.

The regulation for water indicators in section 52.15-11 is proposed to be amended by adding a requirement for sleeves in the lower water column connections to the boiler. This item was recommended by industry and is in accordance with the American Society of Mechanical Engineers boiler code.

A proposed revision for a more suitable formula to determine the required relieving capacity for safety valves and relief valves used on evaporators and other heat exchangers is contained in the proposed amendment to section 52.16 regarding unfired pressure vessels and pressure-containing appurtenances. The proposal will require the relieving capacity of the evaporator shell safety valves to be at least equal to the capacity of the orifice fitted in the steam supply line to the evaporator. This determination will be based upon Napier's empirical formula for the weight of dry

saturated steam discharged through a nozzle under conditions where (1) the back pressure does not exceed the critical flow pressure, and (2) where the back pressure exceeds the critical flow pressure. The back pressure is taken as the set pressure of the evaporator shell safety valve and the critical flow pressure as 58 percent of the pressure of steam supply to the evaporator coils.

A proposed recommendation will permit the installation of dampers in the funnels or uptakes on vessels fitted with automatic combustion control provided the dampers can be locked open manually in the event of failure of the automatic combustion control equipment (46 CFR 53.17-3).

Editorial changes have been proposed for sections 52.6-4, 52.6-5, and 52.15-3. The requirements pertain to reinforced openings and references to material specifications. The testing and inspection of new boilers, as provided in section 54.18-2, is also being . revised. It is proposed to drop the requirement for stamping new boilers with the name of the plate manufacturer and the tensile strength of the material. Very often the head material and shell material have different tensile strengths since they are furnished by different manufacturers. This data will be required to be furnished in a new form CG 935 set forth in a proposed revision of section 57.21-2. This form will include data for both boilers and unfired pressure vessels together with fabrication data. This will include statements regarding tensile strength of material, the manufacturer's name, and identification of the material in the shell and heads. In this connection another proposed amendment to section 54.18-12 will delete unnecessary information presently required to be stamped on unfired pressure vessels. The revised form (CG 935) will list the necessary information needed to identify unfired pressure vessels. It is also proposed to exempt pressure vessels containing refrigerants from internal examination.

Proposed changes in piping requirements would modify the requirements in section 55.19-3 (d) and 55.19-6 (including table P-1 and footnotes). It is proposed to decrease the maximum pressure permitted for furnace buttwelded pipe and to limit such pipe to class II service. This is considered essential because industry now produces pipe of this material up to 4 inches in size, whereas it formerly was produced in maximum sizes of 2 inches in diameter. The larger sizes are not deemed suitable for the pressures now permitted for the smaller sizes. A proposed regulation setting forth the allowable stresses for chromium molybdenum alloy pipe material and a limitation on the use of seamless carbon steel pipe to 850° F. or less and a limit on the use of carbon molybdenum alloy pipe to 900° F. or less has been added. These requirements are needed since recent investigations indicate that seamless carbon steel pipe and carbon molybdenum alloy pipe are susceptible to graphitization at temperatures above 850° F. and 900° F., respectively.

A proposed change to methods of attachments of flange standards has been recommended which will permit bronze high hub flanges to be attached to pipes by introducing the silver brazing alloy from the beveled end of the flange hub in lieu of using the patented preinserted ring of brazing alloy. This type of flange attachment would be limited to a maximum temperature of 406° F. (46 CFR 55.19-8 (e)).

The bolting requirements in section 55.19-9 are considered inadequate for high temperature marine installations and it is proposed to add the bolting requirements as given in the 1943 edition of the American Society of Mechanical Engineers code, which cover bolting design and stresses for high temperature service. In addition, a table of maximum allowable stresses for alloy steel bolting material has been suggested.

The welding requirements in part 56 are being considered for editorial changes and modification to bring them into closer agreement with the American Society of Mechanical Engineers boiler code and for incorporation of changes suggested by industry. In general, the proposed welding requirements are substantially the same as now in effect. The requirements for submerged arc welding have been incorporated into this part as well as existing regulations covering brazing and fusion welding for boiler repairs. which were formerly in part 57. The regulations covering approval of welding electrodes have been revised to conform with the proposed procedure set forth in Coast Guard specifications for arc welding electrodes. The proposed amendments will permit the use of unfired pressure vessels fabricated by class II welding to operate with liquids at temperatures not exceeding 400° F, which is an increase of 100° F, over the present requirements. In addition, the present thickness gages required for X-raying would be replaced by standard American Society of Mechanical Engineers code penetrameters. The present radiograph standards for determining acceptable or nonacceptable welds were also replaced by

American Society of Mechanical Engineers standard radiographs.

As a result of the recent problem of structural failures in the hulls of merchant vessels, the Board appointed by the Secretary of the Navy to investigate the design and construction practices has made several recommendations. New electrode specifications and corresponding reclassification of listed brands are two of the corrective steps indicated in the Board report. At present there are three different sets of specifications intended to classify electrodes for ship construction purposes. These are promulgated by the United States Navy, United States Coast Guard, and the American Bureau of Shipping. Since the end use of the electrodes is the same in all cases, it is evident that this duplication is unnecessary.

In order to streamline the approval of electrodes intended for use in the construction of merchant vessels and equipment subject to inspection of the Coast Guard, a new approval procedure has been agreed upon by the three above-mentioned agencies. Electrodes will be tested in a Naval laboratory and the tests will be witnessed by a surveyor of the American Bureau of Shipping, which agency will prepare a list of approved electrodes for public circulation. The Coast Guard will accept electrodes listed on this new American Bureau of Shipping list and will make no separate listing. The attached specifications are intended to implement this new arrangement for electrode approval.

The new specifications refer to the Navy specification for all types of electrodes included within the scope of the Navy specifications. Since it has been found advisable to permit three additional types on merchant construction, reference is made to the American Welding Society-American Society for Testing Materials specifications for testing of these three types. The listing of electrodes for all types of ship construction will then be identical except that there will be approved brands of types CG-6012, CG-E6012H and CG-E6013H, which will be permitted for certain limited applications on merchant ship construction.

The new specifications include three principal additions to the currently effective AWS-ASTM specifications. The three additional requirements are X-ray tests, humidity tests and a standard color marking to designate the different classes of electrodes. The X-ray examination of the welds is intended to improve the general soundness, particularly in the case of hull welding where X-ray examination has not yet been adopted

for merchant vessel construction. Electrodes capable of depositing superior weld metal under test will obviously give superior welds under ordinary operating conditions. The humidity test is intended to cult out. those electrodes which might deteriorate too quickly in storage. The reason for the color marking of the electrodes is obvious. At present there is no uniform system by which different types of electrodes can be distinguished and although various manufacturers have adopted distinguishing marks, this merely adds to the confusion by introducing a dozen different identifying systems.

The Navy specifications include all three items mentioned above and the color marking has already been widely adopted in the industry.

The casualty and accident investigation regulations in sections 136.100 to 136.110 were based in part on a waiver of certain requirements of 46 U. S. C. 239 (R. S. 4460). As the waiver authority under the present statute will expire on March 31, 1947. it is necessary that the regulations and procedures be revised to comply with the changes in the statutes made by Reorganization Plan No. 3 of 1946 and the Administrative Procedure Act (Public Law 404, 79th Cong., 60 Stat. 238). The proposed recommendations are to cancel the regulations in parts 136 and 137 which were suspended by the waiver of the Commandant dated August 26, 1942, 7 F. R. 6778, and to rewrite the regulations in sections 136,100 to 136,112 to comply with present statutory requirements.

The regulations will provide definite procedures for a Marine Board of Investigation. In 46 U. S. C. 239 the statute calls for "A." "B," and "C" boards, which were abolished by Reorganization Plan No. 3 of 1946 and their functions vested in the Commandant. In lieu of these three boards it is proposed to have marine boards of investigation. Where the marine casualty or accident is not a major marine casualty, an investigating officer only will perform the functions of the board formerly specified in 46 U. S. C. 239.

The proposed new regulations will also cover specifically disclosure of records, persons in service of Coast Guard, depositions, constructions of rules and rules of evidence, computation of time, and evidence of criminal liability.

The proposed regulations for part 136 will cover the requirements for investigations of casualties and accidents and the tentative "table of contents" is self-explanatory:

PART 136-MARINE INVESTIGA-TION REGULATIONS

SUSPART 136.01-AUTHORITY AND SCOPE OF REGULATIONS

136.01-1 Authority and Scope of Regu-

SUBPART 136.03—DEPINITIONS OF TERMS USED

136.03-1 Marine casualty or accident. 136.03-5 Major marine casualty. 136.03-15 Party in Interest.

136.03-20 Coast Guard districts. 136.03-25 District Commander. 136.03-30 Investigating officer. 136.03-36 Examiner.

> SUBPART 136,05—NOTICE OF MARINE CASUALTY AND VOYAGE RECORDS

136.05-1 Notice of marine casualty. 136.05-5 Substance of marine casualty notice. 136.05-10 Piece where notice of marine

136.05-16 Place where notice of marine casualty to be given.
136.05-16 Government employees to give notice.

136.06-20 Report by officer in charge of vessel in person. 136.06-25 Voyage record, retention of 136.05-30 Report of accident to aid to

DEVIGATION. SUBPART 136.07—INVESTIGATIONS

186.07-1 Commandant or District Commander to order investigation.

136.07-6 Investigating officers, powers of.

136.07-10 Report of investigation. 136.07-15 Recommendations, action on. 136.07-20 Transfer of jurisdiction.

136.07-30 Testimony of witnesses under oath.

136.07-35 Counsel for witnesses. 136.07-40 Coast Guard vessels involved

in marine casualties, 136.07-45 Foreign units of Coast Guard.

investigation by.
136.07-50 Marine Board of Investigation,
recommendations of

recommendations of.

136.07-55 Information to be furnished
Marine Board of Investigation.

SUPPART 120.09-M ARINE BOARD OF INVESTIGATION

136.09-1 Commandant to designate. 136.09-5 Powers of Marine Board of Investigation.

136.09-10 Witnesses, payment of. 136.09-15 Time and place of investigation, notice of; rights of witnesses, etc.

136.09-20 Record of proceedings. 136.09-25 United States Attorney to be

notified. 136 09-30 Action on report.

136.09-35 Preferment of charges.

SUBPART 136.11—WITNESSES
AND WITNESS FESS
136.11-1 Employees of vessels controlled

by Army or Navy as witnesses.

136.11-5 Coercion of witnesses.

136.11-5 Coercion of witnesses. 136.1)-10 Fees.

> SUBPART 136.13-DISCLOSURE OF RECORDS

136.13-1 Record of investigation. 136.13-5 Records held confidential. 136.13-10 Production upon subpoens.

SUBPART 136.15—PERSONS IN SERVICE OF COAST GUARD

136.16-1 Persons in service of Coast Guard.

SUPPART 136.17-DEPOSITION

136,17-1 Application, procedure, and admissibility.

TION OF RULES AND RULES OF EVIDENCE

136.19-1 Construction of rules. 136.19-5 Adherence to rules of evidence.

> SUBPART 136.21-COMPUTA-TION OF TIME

136.21-1 Computation of time.

SUBPART 136.23-EVIDENCE OF CRIMINAL LIABILITY

136.23-1 Evidence of criminal liability.

The regulations for suspension and revocation proceedings dealing with licenses and certificates issued by the Coast Guard or its predecessors to merchant marine personnel were also contained in sections 136.100 to 136 .-112. The Administrative Procedure Act (Public Law 404, 79th Cong.) also requires the modification of such proceedings. The proposed regulations on suspension and revocation proceedings are to be in Part 137 and will be separated for the first time from the requirements dealing with investigations of casualties and accidents. The Reorganization Plan No. 3 of 1948 authorized the Commandant to delegate his authority in making decisions under this statute, and the Administrative Procedure Act has required the use of examiners to conduct the hearings in suspension and revocation proceedings. These examiners have been delegated authority by the Commandant to render final decisions in cases heard by them which are subject to appeal to the Commandant.

The new requirements added give in detail how hearings will be conducted as well as the procedures and requirements applicable to suspension and revocation proceedings. The new regulations which have been added in part 137 cover evidence on criminal liability, disclosure of records, depositions, and construction of rules and

rules of evidence.

The following tentative Table of Contents is self-explanatory.

PART 137—SUSPENSION AND REV-OCATION PROCEEDINGS

SUBPART 137.61—AUTHORITY AND SCOPE OF REGULATIONS

Sec. 137.01-1 A

137.01-1 Authority, 137.01-5 Disciplinary proceedings.

> SUBPART 137.05—INVESTIGAT-ING OFFICERS AND INVESTIGA-TIONS

137.05-1 Designations, 137.05-6 Investigating procedures, 137.05-10 Instituting proceedings, 137.05-15 Service of charges, specifications, etc.

SUBPART 137.07-EXAMINERS

137.07-1 Designations. 137.07-5 Responsibilities.

SUBPART 137.09-HEARINGS

187,09-1 Procedures for conduct of hearings.

137.09-5 General.

137.09-10 Examiner's opening statement. 137.09-15 Production of documents and Selective Service data.

137.09-20 Advising person charged of

137.09-26 Appearances. 137.09-30 Removal of

137.09-30 Removal of witnesses from hearing room. 137.09-35 Arraignment and plea.

137.00-40 Opening statement of investi-

137.09-45 Opening statement by or on behalf of person charged.

137.09-50 Witnesses, 137.09-55 Argument, 137.09-60 Submission

137.09-60 Submission of briefs, proposed findings and conclusions.

137.09-65 Findings. 137.09-70 Prior record. 137.09-75 Decision.

137.09-75 Decision. 137.00-80 Service of original findings and order.

137.09-85 Notification of right to appeal. 137.09-90 Declaration that hearing is closed.

SUBPART 137.11-APPEALS

137.11-1 Time for flung, contents, etc. 137.11-5 Record for decision on appeal. 137.11-15 Temporary documents.

> SUBPART 137,13-WITNESSES AND WITNESS PEES

137.13-1 Witnesses and witness fees.

SUBPART 137,15-EVIDENCE OF CRUMINAL LIABILITY

137.15-1 Referral to Department of Justice.

137.15-5 Use of judgments of convictions.

SUBPART 137.17-DISCLOSURE OF RECORDS

137,17-1 Statements of witnesses and exhibits.

137.17-5 Final opinions and orders. 137.17-10 Records held confidential.

137.17-15 Transcripts of disciplinary records.

137.17-26 Production upon subpoena. 137.17-25 Testimony by Coast Guard personnel.

SUBPART 137.19-DEPORTTIONS

137.19-1 Application, procedure and admissibility.

SUBPART 137.21—CONSTRUC-TION OF RULES AND RULES OF EVIDENCE

137.21-1 Construction of rules.
137.21-5 Adherence to rules of evidence.

Upon a petition of the Lakes Carriers' Association proposed changes in the Pilot Rules for the Great Lakes will be considered. The proposed changes deal with regulations set forth in sections 322.02, 322.1, 322.4 to 322.8, inclusive, 322.10, 322.13, and 322.15 (a) in title 33 of the Code of Federal Regulations.

The definition "risk of collision" in section 322.02 is proposed to be modified by deleting the word "compass" before the word "bearing", since other methods of obtaining bearings are used by pilots. Removal of the word

"compass" does not weaken the rule

but rather strengthens it.

The recommendation regarding the blast signal in the second paragraph of section 322.1 suggests a deletion of most of the meaning so that one blast would mean "except as otherwise provided in these rules, one blast means 'I am directing my course to starboard." The recommendations for the amendment to exchange of signal whistles for passing in section 322.4 would require the exchange of whistle signals before vessels are within one-half of a mile of each other. This would promote safety since two vessels, each going 12 miles per hour, approaching each other head-on, will cover one-half mile in 11/4 minutes. It is felt that any distance of less than one-half mile would not give sufficient time for exchange of signals and would be considered unsafe.

The changes recommended in section 322.5 would substitute the words "end-on, or nearly end-on," for the words "head and head or nearly so." The proposed words are used in Rule 17 of the Statute and should, accordingly, be used in the regulations. In addition, it has been suggested that the words "short and" be deleted wherever they appear in this section in connection with whistle signals. This is suggested since the Great Lakes rules do not define a short blast of the whistle. Also the term "distinct blast" without any implied limit

of time will be safer.

The regulations in section 322.6 entitled "Vessels Nearing Short Bend or Curve in Channel" provide that a steamer nearing a short bend or curve in the channel, where the pilot cannot observe a steamer approaching from the opposite direction for a distance of one-half mile, the pilot shall, within a half-mile of such curve or bend, give a signal of one long blast of the whistle, which signal shall be answered by a similar blast given by the pilot of any steamer within hearing that may be approaching on the other side and within one-half mile of such bend or curve. Under present regulations, if the first signal of such pilot is not answered, he is to consider the channel clear and govern himself accordingly. It is proposed to delete the clause, "but, if the first signal of such pilot be not answered. he is to consider the channel clear and govern himself accordingly," because atmospheric conditions or extraneous noises might prevent the signal from being heard by another steamer approaching the bend and failure to return the signal is likely to give a false feeling of security. Even though a signal might not be returned, a bend or curve in a channel should be rounded with caution.

The proposed change in section 322.7 entitled, "Vessel moving from dock," would add the requirement that an approaching steam vessel would be required to answer the signal given by the vessel leaving a dock. This signal would replace the requirement that any approaching steamer shall give the same signals as in the case of steamers meeting at a bend. This change is proposed to define the signal to be used without making reference to a signal used for another purpose and to make clear that an approaching vessel has only to answer the signal from the vessel moving from dock and does not have to initiate the signal.

The regulations in section 322.8 entitled, "Vessels Running in Same Direction; Signal for Overtaking," are considered somewhat confusing and several minor changes are proposed. Under the present rule, once an overtaking vessel has by whistle signal signified her desire to pass the overtaken vessel and has been denied that privilege by the danger signal, the burden then shifts to the overtaken vessel. This is not considered right; the burden should always remain on the overtaking vessel. Maintenance of the burden on the overtaking vessel is accomplished by reguiring the steamer astern to hold back and after an appropriate interval, if she still desires to pass, to make the proper signal so indicating and under no circumstances shall the steamer astern attempt to pass the steamer ahead until such time as they have reached a point where it can be safely done when the steamer ahead shall signify her willingness by blowing the proper answering signal. Other changes proposed will delete the word "short" from the passing signals and substitute the words "danger signal" instead of "several short and rapid blasts of the whistle. not less than five." The only change proposed in the second paragraph is at the end where an attempt is made to clarify just what vessel is meant by "she." The present use of "passed and clear" is considered confusing and it is suggested that it should be either "past and clear" or "passed and cleared." In the third paragraph it is recommended to delete the words, "by day," since the rule is applicable at all times and these words are unnecessary.

The proposed amendment to section 322.10 covers the situation when vessels are approaching each other at right angles or obliquely, and would provide for a distinct blast to be blown by each vessel in the crossing situation instead of a blast of unspecified length by the holding-on vessel and a short blast by the giving-way vessel as presently required.

The proposed amendment to section 322.13 requires an additional signal for a vessel at anchor in a fog. In addition to the ringing of the bell, which is now required, she shall also sound on the whistle or horn a signal of 1 short blast, 2 long blasts, and 1 short blast in quick succession at intervals of 3 minutes.

Proposed amendments are also being considered regarding distress signals as set forth in section 322.15 (a). These changes will add several other well-recognized distress signals that are included in other rules and should, therefore, be permitted on the Great Lakes.

A proposal to require merchant vessels to submit a dangerous cargo stowage plan and a detailed manifest to the captain of the port will also be considered. This requirement would amend section 6.25 of title 33, Code of Federal Regulations (Port Security Regulations). The effect of the proposal would be that the captain of the port would issue the permit required by the present regulations after reviewing the stowage plan and manifest of the dangerous cargo.

THE "DEL NORTE"

The Del Norte, the first major United States liner built since the end of the war is now being operated in the South American trade by the Mississippi Steamship Co. She is of over 16,000 tons displacement, combination cargo and passenger type and was built by the Ingalls Shipbuilding Co. for the Mississippi Steamship Co., and is the first of three sister ships. She is a modification of the basic C-3 hull of the Maritime Commission. Amples space is provided for 120 passengers and a crew of 124.

She is 495 feet long with a beam of 69 feet 6 inches. In addition she can carry about 6,500 tons of cargo. The Del Norte is well compartmented and has seven cargo holds, two of which are general cargo, one special cargo and stores and one refrigerated cargo forward of machinery space and three general cargo holds aft. Cargo protection is provided by the installation of "Cargocaire" in all holds. Located at opposite ends of each hold are supply and exhaust fans connected to duct systems arranged to permit distribution of air to the wings as well as to the hatch area in each deck level. These fans may be used to ventilate the holds with outside air when weather conditions permit or to recirculate the air in the holds, excluding outside air when the weather is not favorable.

The vessel is powered by steam and is capable of 16.5 knots sustained sea speed. Propulsion is provided by General Electric cross-compound doublereduction geared impulse turbines rated at 8,500 horsepower at 85 propeller revolutions per minute and can be operated continuously at 10-percent overload.

There are 16 ahead stages in the turbines, 8 in the high-pressure unit and 8 in the low-pressure unit, and the turbines are arranged so that either the high- or low-pressure unit can be operated separately. Main and emergency switchboards are protected by a system of back-up breakers calibrated to trip at 90 percent of the interrupting rating of load breakers being protected. Machinery spaces are protected by a CO₂ extinguishing system, and the cargo spaces have a combined smoke detecting and CO₂ extinguishing system.

The interior decoration of the vessel received careful consideration, and its main theme is of the city of New Orleans. All joiner bulkheads and structural insulation are of approved fire retardant materials in accordance with the Coast Guard's regulations contained in subchapter M. The dining room is arranged deep in the ship with a view to comfort especially in heavy weather. Elevator service is provided from the shelter deck down to meals on the second deck or up to the promenade and boat deck. All rooms for the 120 passengers are outside with an unobstructed view of the ocean. Windows are provided instead of ports, and each room is provided with beds instead of bunks. To provide for the comfort of the passengers and crew, the entire ship is air conditioned. Aluminum is used extensively for decoration throughout the interior of the ship, and the false stack is also aluminum. The false stack is utilized as space for the radio room and officers' quarters.

Aluminum alloy is used extensively in the lifesaving equipment in such utilities as lifeboats, boat davits, and winches. Radar has been installed for greater safety in navigating when the need arises. It can readily be seen that here in one ship is luxury, comfort, and safety which speaks well for the maritime industry.

HEARING UNITS

Coast Guard Merchant Marine Hearing Units and Merchant Marine Details investigated a total of 1,155 cases during the month of November 1946. From this number hearings resulted involving 51 officers and 224 unlicensed men. In the case of officers no licenses were ordered revoked, 16 were suspended, 24 were suspended on probation, 2 were voluntarily surrendered. 1 was closed with admonition, and 7 cases were dismissed. Of the unlicensed per-

sonnel 10 certificates were revoked, 101 were suspended, 96 were suspended on probation, 9 were voluntarily surrendered, 12 were closed with admonition and 12 were dismissed after hearing.

OPERATION PHOBOS

Corgo Fire Tests

The Operation Phobos committee held a meeting on January 29, 1947, at Coast Guard Headquarters. Washington, D. C. This committee represents the following representatives of industry and the various services of the Federal Government concerned as follows:

American Petroleum Institute. National Board of Fire Underwriters.

United States Salvage Association. National Fire Protection Association.

Shipbuilders Council of America. Board of Underwriters of New York. International Association of Fire Chiefs.

North American Companies.
National Federation of Shipping.
Inc.

Committee of Fire Protection Safety at Sea Conference. Marine Division, National Fire Pro-

tection Association.
Army Transportation Corps, War

Army Transportation Corps, War Department.

Fire Prevention Branch, Corps of Engineers, War Department. Bureau of Ships, Navy Department.

Chemical Division, Naval Research Laboratories, Navy Department. National Bureau of Standards. United States Maritime Commis-

sion. (United States Coast Guard.

At this meeting the committee evaluated the results of the nine fire tests conducted during the past summer on board the Coast Guard ship PHOBOS at San Francisco, Calif., and made preliminary findings and recommendations. The results of the tests conducted and the final report covering the experiments will be published in the Proceedings in the near future. This information will not only be interesting but should be very helpful to those actively concerned with fire fighting and fire prevention on board merchant vessels.

The objectives for the tests were:

1. To better enhance the security of life and safety of vessels at sea by developing improved methods of fire control and extinguishment.

To obtain information on the characteristics of fires in holds involving typical cargoes, with respect to: speed of development of the fire, temperatures both inside the hold and on boundary bulkheads and deck; nature of gases evolved; intake of air and efflux of gases; and probable rapidity of spread of fire to adjacent holds.

 To establish best methods of controlling and holding such fire in check, which would involve experimentation with: Methods of sealing off hold, introduction of carbon dioxide, and introduction of steam.

4. To determine most effective methods of final extinguishment; working cargo under adverse conditions; probably involving a combination of steps indicated in paragraph (3), together with: Application of fog and water streams; development of methods of ventilating the hold to remove smoke and hot gases; use of respiratory protection; possible effectiveness of water tension reducers in producing better water penetration into baled fibers, and determination of best means of entry into the hold.

5. To develop data which would lead to effective and economical fixed methods of fire control, information such as: Proper quantity, rate of discharge, and points of application of carbon dioxide; establishing or disproving the value of steam as a smothering agent; development of improved closures for ventilators and hatch openings.

In the Proceedings for November 1946, page 188, an article entitled, "Fire Fighting Abroad Ship: Advance Training Methods Developed Under War Impetus" summarized some of the experiments conducted in Operation Phobos.

INSPECTION CONDITION PRECE-DENT TO DOCUMENTATION

The initial inspection of a merchant vessel of the United States does not require as a prerequisite that the vessel be documented as a vessel of the United States by the collector of customs at the home port of the vessel. An erroneous conception of the navigation laws relative to inspection and documentation of vessels to the effect that in order for a vessel to be inspected it is essential that such vessel first be documented as a vessel of the United States has occurred repeatedly. The exact converse of this erroneous legal premise is correct for under Revised Statutes 4498, as amended (46 U.S. C. 496), and section 12 of the act of May 28, 1908 (46 U. S. C. 397), no vessel required to be inspected by the provisions of title 52 of the Revised Statutes or by the Seagoing Barge Act may be issued a document as a vessel of the United States until a certificate of inspection for such vessel is delivered to the collector of customs at the home port of the vessel.

LESSONS FROM CASUALTIES

CARELESSNESS CAUSES ACCIDENTS

An engineer named Joe Assembled brasses on a dynamo

To get them in plumb Required the use of his thumb

His thoughts went astray And the consequences he did pay

No thumb-poor Joe.

This accident actually happened. The first assistant engineer was reassembling cross-head brasses on a steam dynamo. He used his thumb and somehow got it jammed between the cross head and the connecting rod. He lost the first joint and spent 6 days in the hospital recuperating.

To Joe, the reassembling of crosshead brasses was an "old" job and it may be that "familiarity breeds contempt." He relaxed his attention and in a brief second it happened, and another preventable accident occurred.

"Stay alert—don't get hurt" is a good motto to practice. Every time you see Joe's hands now he has a perpetual reminder of what one brief second's lapse of attention can do. Carelessness causes accidents, which may take forever to overcome.

Carelessness, in some degree, is the

cause of one out of every two shipboard injury cases.

As hours in a hospital go slowly by From the loss of a hand or a foot or an eye.

You probably ask the reason why The cost of carelessness is so high.

A LINE "BITE" IS DANGEROUS

Sailors are reputedly adept at handling lines—both ashore and afloat. But this adeptness does not alone prevent serious accidents. When the lines are "paying" out or being brought "taut" it often requires nimbleness and quick thinking to stay "clear." But let's not go too far afield and instead examine a few of the recent reports on injury cases involving handling of lines aboard ships.

1. The slack was being taken out of the aft spring line with the chief mate in charge. The boatswain started the winch and in putting the bight of the line around the fair lead got his left hand caught under the line, crushing three fingers.

2. A deckhand handling lines on a barge locking on the Mississippi River lost his leg when he got caught in the bight of a line. This accident happened at I o'clock in the morning and the location of the bitts to which he was securing his line was in the

shadow cast by the lights on the lock and he did not notice the position of his line before it was too late.

3. From a ship we received a report of the painful injuries suffered by a deckhand who tripped trying to jump over a mooring cable. Negligence? Yes. There was no urgency existing that made such haste necessary.

4. A deckhand on a Great Lakes steamer ruptured himself pulling up a long length of hawser from the fantail. Negligence? Yes, again. He should not have attempted the job alone.

These accidents are often considered the results of occupational hazards. But as accidents they are preventable. To be preventable you have to be alert and know what can happen under certain circumstances. Often the accident occurs faster than the eye can see when handling lines; that the "bite" in the "bight" of a line can be fearful indeed.



APPENDIX

Amendments to Regulations

TITLE 46-SHIPPING

Chapter I—Coast Guard: Inspection and Navigation

Subchapter C—Motorboats and Certain Vessels Propelled by Machinery Other Thon by Steam Mare Than 65 Feet in Length

PART 29-NUMBERING OF UNDOCU-MENTED VESSELS

Section 29.812 Procedure relating to

chant Marine Council on October 22.

1946, at Washington, D. C. All the writ-

numbering of motorboats is hereby canceled and the following regulations are issued in its stead:

Sec. 29.8 Basis and purpose of numbering regulations.

29.10 Vessels required to be numbered.
29.12 Vessels not required to be numbered.

29.14 Application for certificate of award of number.

29.16 Documentary evidence of ownership.

29.18 Award of number.

29,20 Certificate of award of number kept on board undocumented vessel. 29.22 Sales of undocumented vessels to allens.

29.24 Owner furnishing information when changes occur.

29.26 Procedure upon change of permanent residence.

29.28 Number assigned required on bows of undocumented vessel.

AUTHORITY: §§ 29.8 to 29.28, inclusive, issued under sec. 1, 40 Stat. 602; 46 U. S. C. 282; Reorg. Plan No. 3, 1946; 11 F. R. 7875. Statutes giving additional authority are cited in parentheses at the end of affected sections.

§ 29.8 Basis and purpose of numbering regulations. By virtue of the authority vested in the Commandant of the Coast Guard under section 101 of the Reorganization Plan No. 3 of 1946 (11 F. R. 7875) and the act of June 7, 1918, as amended (46 U. S. C. 288), the regulations in this part are prescribed to provide adequate means for numbering of undocumented vessels in accordance

'A notice regarding the proposed changes in the regulations about numbering undocumented vessels was published in the Federal Register, dated September 27, 1946 (11 F. R. 11014), and a public hearing was held by the Merana and oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions submitted were considered by the Merana data oral comments and suggestions oral comments and suggestions oral comments and suggestions oral comments are considered by the Merana data oral comments and suggestions oral comments an

The amendments to the regulations shall become effective on March 3, 1947,

2 12 F. R. 707; Jan. 31, 1947.

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with the intent of the statute and to obtain its correct and uniform administration.

§ 29.10 Vessels required to be numbered. The following undocumented vessels are required to be numbered:

(a) All vessels equipped with permanently installed motors.

(b) All vessels over 16 feet in length equipped with detachable motors.

§ 29.12 Vessels not required to be numbered. (a) The following undocumented vessels are not required to be numbered:

(1) All vessels not exceeding 16 feet in length temporarily equipped with detachable motors.

(2) Public vessels.

(3) Motor lifeboats carried as lifesaving equipment on inspected vessels.

"temporarily (b) The words equipped with detachable motors" shall be construed to mean outboard motors which are clamped or otherwise temporarily fastened as distinguished from outboard motors bolted or otherwise permanently secontrolling principle cured. The shall be whether or not the vessel has permanently installed motors rather than the design or construction of the vessel.

(c) Undocumented vessels listed in paragraph (a) of this section will not be numbered except upon instructions of the Commandant.

§ 29.14 Application for certificate of award of number. (a) The owner of any undocumented vessel however acquired, or his duly authorized agent, shall make application for a certificate of award of number to the Officer in Charge, Marine Inspection, United States Coast Guard, having jurisdiction over the area in which the vessel is owned. If the boat is to be in the possession of a person other than the person who holds title thereto under a conditional sales or retain title contract or similar arrangement under which title does not pass, the application shall be made by the person who holds legal title.

(b) Upon purchasing or acquiring a vessel which previously has been issued a certificate of award of number. and after completion of the bill of sale on the reverse side of the certificate of award of number (Form CG 1513) by the vendor or the former owner, the purchaser will execute the application for number for undocumented motor vessel, which is incorporated on the reverse side of the certificate of award of number, and surrender the certificate, bill of sale, and application for a new number (which are all on Form CG 1513) to the Officer in Charge, Marine Inspection, within the statutory period of

(c) In the case of new vessels or in the case of vessels which have not been previously numbered or in the case of vessels which have been issued the old form of certificate of award of number (NAVCG 1513), which does not contain the application, the owner of the vessel or his duly authorized agent shall make the application in duplicate for a number on Form CG 1512,2 application for number for undocumented motor vessel, and shall surrender this form, after completion, together with documentary evidence of ownership or the certificate of award of number with the bill of sale properly executed, to the proper Officer in Charge, Marine Inspection.

§ 29.16 Documentary evidence of ownership. The Coast Guard District Commander or the Officer in Charge, Marine Inspection, who receives the application for an award of number will satisfy himself that the applicant has legal title to the vessel. Any case in which ownership or legal title is in doubt will be referred to the Commandant. Original ownership may be proved by the purchaser as follows:

(a) Bill of sale.

(b) Receipted bills for material used in construction.

(c) Statement of reputable boat building concern signed by an owner. officer or duly authorized agent thereof that the boat was constructed for the applicant in its factory or yard.

(d) In the case of vessels sold as surplus property by the United States Maritime Commission or the War Shipping Administration, the papers furnished the successful bidder in the form of a sale order or certificate of delivery of vessel, as the case may be. shall be accepted as sufficient evidence of ownership.

(e) Such other evidence of ownership as is acceptable to the Coast Guard District Commander or the Officer in Charge, Marine Inspection.

§ 29.18 Award of number. A number will be awarded by the Officer in Charge, Marine Inspection, upon recelpt of the application together with proof of ownership and a letter, in lieu of the certificate, will be issued by him, authorizing the vessel to be operated. pending issuance of the certificate. The Coast Glard District Commander will issue the certificate of award of number in all instances except where he has designated and authorized officers or employees under his command to issue such certificates in his behalf.

§ 29.20 Certificate of award of number kept on board undocumented vessel. (a) The certificate of award of number for an undocumented vessel shall be kept on board at all times and shall be accessible to the person In charge except when such certificate is in the custody of the Coast Guard District Commander or the Officer in Charge, Marine Inspection. This requirement, however, does not apply to any vessel not exceeding 17 feet in length, measured from end to end over the deck, excluding sheer, nor to any vessel regardless of length if the design of fittings is such that the carrying of the certificate of number on board would render it imperfect, illegible or would tend to descroy its use as a means of ready identification.

(b) In the case where a letter is issued assigning a number previous to the issuance of a certificate of award of number, the new owner may operate such vessel without penalty for failure to have such certificate of award of number If the letter is carried and produced when necessary for identification. (R. S. 5294, as amended, sec. 21, 54 Stat. 167, 18 U. S. C. 642, 46 U. S. C. 526t)

§ 29.22 Sales of undocumented vessels to aliens. For the duration of the war the issuance of a certificate of award of number to a vessel, the sale or transfer of which, in whole or in part, is subject to section 37 of the Shipping Act, 1916, as amended (46 U. S. C. 835), shall be subject to the United States Maritime Commission's General Order 58, as revised (10 F. R. 14210). For a vessel less than 1,000 gross tons and not documented under the laws of the United States, General Order 58 gives blanket approval to the sale, mortgage, lease, charter, delivery, or transfer and agreement for the sale, mortgage, lease, charter, delivery, or transfer to any person not a citizen of the United States of any vessel or interest therein owned in whole or in part by any person who is a citizen of the United States or by a corporation organized under the laws of the United States or of any state, territory, district or possession thereof. For a vessel documented under the laws of the United States or a vessel 1,000 gross tons or over, prior approval of the sale by the Maritime Commission is required.

§ 29.24 Owner furnishing information when changes occur. (a) The owner of a numbered vessel shall notify the Coast Guard District Commander or Officer in Charge, Marine Inspection, within ten days, if:

(1) The vessel is lost, destroyed, or

abandoned.

(2) The vessel is transferred from

one person to another; or

(3) He moves his permanent restdence to a place in another customs district or to a place within the jurisdiction of another Coast Guard District Commander.

Not filed with the Division of the Federal Register.

(b) In the case of change of ownership, loss, destruction, or abandonment of a numbered vessel, the notice shall be accompanied by a surrender of the certificate of award of number if it is in existence.

\$ 29.26 Procedure upon change of permanent residence. If the owner has moved his permanent residence to a place in another customs district or to a place within the jurisdiction of another Coast Guard District Commander, the original number will be retained by the vessel and the owner's change of permanent residence shall not be a cause for the surrender of the certificate except under special instructions of the Commandant. However, vessels sold into another customs district or Coast Guard district may be renumbered anew.

§ 29.28 Number assigned required on bows of undocumented vessel. (a) Every undocumented vessel required to be numbered shall have the number awarded or assigned painted on or attached to each bow so that the number reads from left to right.

(b) The number shall be in block characters of good proportion, not less than three inches in height, and parallel with the water line as near the forward end of the bow as legibility of the entire number for surface and aerial identification permits. The number shall be located as high above the water line as practicable, but in no case less than three inches from the bottom of the numbers to the water line.

(c) The numbers shall be of a color which will contrast with the color of the hull so as to be distinctly visible and legible; i. e., if the hull is light, the color of the numbers shall be dark, or if the hull is dark, the color of the numbers shall be light.

Dated: January 24, 1947.

(SEAL)

J. F. FARLEY, Admiral, U. S. C. G., Commandant,

[F. R. Doc. 47-918; Filed, Jan. 30, 1947; 9:15 a. m.]

Subchapter D-Tank Vessels

PART 31—Inspection and Certification

GENERAL

Part 31 is amended by adding a new § 31.1-7" reading as follows:

§ 31.1-7 Equipment installations on vessels during World War II— TB/ALL. Boilers, pressure vessels,

It is found that the critical shortage of certain materials during the war caused

* 12 F. R. 640; Jan. 29, 1947.

machinery, piping, electrical and other installations, including lifesaving, fire-fighting, and other safety equipment, installed on vessels during the Unlimited National Emergency declared by the President on May 27. 1941, and prior to the termination of Title V of the Second War Powers Act. as extended (Sec. 501, 56 Stat. 180; 50 U. S. C., App. Sup., 835), which do not fully meet the detailed requirements of the regulations in this chapter, may be continued in service if found to be satisfactory by the Commandant for the purpose intended. In each instance prior to final action by the Commandant, the Officer in Charge, Marine Inspection, shall notify Headquarters of the facts in the case, together with recommendations relative to suitability for retention. (R. S. 4405 and 4417a, as amended; 46 U.S. C. 375, 391a; sec. 101, Reorganization Plan No. 3 of 1946; 11 F. R. 7875)

Subchapter G—Ocean and Coastwise: General Rules and Regulations

PART 63-INSPECTION OF VESSELS

Section 63.16 " is amended by designating the present material therein as paragraph (a) and by adding a new paragraph (b) reading as follows:

§ 63.16 Use of approved equipment.

(b) Boilers, pressure vessels, machinery, piping, electrical and other installations, including lifesaving, fire-fighting, and other safety equip-

the manufacturing of certain items to be discontinued or greatly curtailed and it became necessary in the successful prosecution of the war to issue orders under the authority of section 501 of the Second War Powers Act waiving certain requirements of the regulations in this chapter for certain equipment and installations. As the authority for the issuance of waivers under the terms of the statute, as extended, will expire on March 31, 1947, it will be necessary in all instances to comply with the requirements of the regulations in this chapter after that date.

It is hereby further found that compliance with the notice, public rule making procedure, and effective date requirements of the Administrative Procedure Act (Pub. Law 404, 79th Cong.: 60 Stat. 237) or R. S. 4417a, as amended (46 U. S. C. 391a), is impracticable and contrary to the public interest in that the time intervening between the date when information upon which these regulations are based became available and when these regulations must become effective is insufficient for such compliance, and since postponement in issuing the regulations will work an unique hardship in converting merchant vessels to peacetime operation.

The purpose of these regulations will be to permit certain equipment or installations, if found to be satisfactory by the Commandant for the purpose intended, to be continued in service so long as in good and serviceable condition. ment, installed on vessels during the Unlimited National Emergency declared by the President on May 27. 1941, and prior to the termination of Title V of the Second War Powers Act, as extended (sec. 501, 56 Stat. 180, 50 App. Sup., 635), which do not fully meet the detailed requirements of the regulations in this chapter, may be continued in service if found to be satisfactory by the Commandant for the purpose intended. In each instance prior to final action by the Commandant, the Officer in Charge, Marine Inspection, shall notify Headquarters of the facts in the case, together with recommendations relative to suitability for retention. (R. S. 4405, 4417, 4417a, 4418, 4426, 4429, 4433, 4453, 4470, 4471, 4479, 4481, 4482, 4488, and 4491, as amended; 35 Stat. 428, sec. 1, 49 Stat. 1544, sec. 2, 54 Stat. 1028, sec. 8, 55 Stat. 244; 46 U. S. C. 367, 375, 391, 391a, 392, 396, 404, 407, 411, 435, 463, 463a, 464, 472, 474, 475, 481, 489, 50 U. S. C. 1275; sec. 101, Reorganization Plan No. 3 of 1946, 11 P. R. 7875)

Subchapter H-Great Lakes: General Rules and Regulations

PART 79-INSPECTION OF VESSELS

Section 79.18 "is amended by designating the present material therein as paragraph (a) and by adding a new paragraph (b) reading as follows:

§ 79.18 Use of approved equipment. (See § 63.16 of this chapter, as amended, which is identical with this section.)

Subchapter I—Bays, Sounds, and Lakes Other Than the Great Lakes: General Rules and Regulations

PART 97-INSPECTION OF VESSELS

Section 97.17 ' is amended by designating the present material therein, as paragraph (a) and by adding a new paragraph (b) reading as follows:

§ 97.17 Use of approved equipment (See § 63.16 of this chapter, as amended, which is identical with this section.)

Subchapter J—Rivers: General Rules and Regulations

PART 116-INSPECTION OF VESSELS

Section 116.17 " is amended by designating the present material therein, as paragraph (a) and by adding a new paragraph (b) reading as follows:

§ 116.17 Use of approved equipment (See § 63.16 of this chapter, as amended, which is identical with this section.)

Dated: January 23, 1947.

[SEAL] MERLIN O'NEILL, Rear Admiral, U. S. C. G., Acting Commandant

[F. R. Doc. 47-845; Filed, Jan. 28, 1947; 8:51 s. m.]

^{*}By virtue of the authority vested in me, I find that an emergency exists and the following amendments to the regulations are prescribed and shall become effective upon the date of publication of this order in the Federal Register.

Subchapter G Ocean and Coastwise: General Rules and Regulations

PART 61—FIRE APPARATUS; FIRE PREVENTION

Part 61 is amended by adding a new § 61.01,* to immediately precede § 61.1, reading as follows:

\$ 61.01 Basis and purpose of regulations. By virtue of the authority vested in the Commandant of the Coast Guard under section 101 of the Reorganization Plan No. 3 of 1946 (11 P. R. 7875), R. S. 4405, 4426, 4470, 4471, 4477, and 4479, as amended, Act of June 20, 1936, section 2 of Act of October 9, 1940, and section 5 (e) of Act of June 6, 1941 (46 U. S. C. 367, 375, 404, 463, 463a, 464, 471, 472; 50 U. S. C. 1275), the regulations in this part are prescribed to provide adequate means for detecting, preventing, or fighting of fires on board vessels subject to these regulations in accordance with the intent of the various statutes on fire apparatus or fire prevention and to obtain their correct and uniform administration. (R. S. 4405, 4426, 4470, 4471, 4477, and 4479, as amended, 49 Stat. 1544, sec. 2, 54 Stat. 1028, sec. 5 (e), 55 Stat. 244; 46 U. S. C. 367, 375, 404, 463, 463a, 464, 471, 472; 50 U. S. C. 1275; sec. 101, Reorganization Plan No. 3 of 1946; 11 F. R. 7875)

Section 61.17 (c) *7 is amended to read as follows:

§ 61.17 Fire-detecting and automatic sprinkling systems.

(c) Smoke-pipe systems—(1) Scope of installations. Systems of this type shall provide a detecting device to which all smoke pipes shall lead, which device shall be located in the wheelhouse, in a fire control station in which a 24-hour watch is kept, or in convenient proximity to the valves of the extinguishing system, provided there are transmitted to the wheelhouse or fire control station means for determining the compartment reporting the alarm and audible alarms are provided as required in this section.

(ii) Smoke collectors shall be installed overhead in each compartment protected and shall be so located that no point on the overhead deck is more than 40 feet from a collector. The indicating pipes or tubing shall be not smaller than threefourths inch inside diameter. When more than one smoke collector is required for a compartment, not more than two collectors may be connected to one indicating pipe. Each compartment shall have one or more indicating pipes extending to the detecting device, except that the pipes from small adjacent compartments not exceeding a combined volume of 5,000 cubic feet may be joined. No smoke collectors shall be located nearer to the edge of the opening of a ventilator than three times the dlameter or equivalent diameter of the opening.

(ili) Sufficient quantity of the exhaust shall discharge into the wheelhouse or fire station to permit the detection of fire by odor, and a valve plainly marked and readily operable from that compartment shall be provided to direct the exhaust, if obnoxious, to the outside. Where the detecting cabinet is not installed in the wheelhouse or fire station the residual exhaust shall be discharged in the vicinity of the detecting cabinet.

(Iv) Suction fans shall be furnished in duplicate, and shall be provided with switches to permit their operation from the emergency lighting circuit. Where the emergency lighting voltage is less than the normal lighting voltage, one fan shall be so arranged that it may be operated from either source.

(v) A trouble signal located in the fire control station or the wheelhouse shall be provided which will indicate the inability of the system to report a smoke alarm.

(vi) Where exposed to injury in cargo compartments the collectors and smoke pipes shall be reasonably protected against injury.

(vii) All smoke pipes shall be installed to grade to low points and at low points provided with drains. These pipes shall be run with as easy bends as practicable.

(viti) The smoke inlets in cargo holds should be examined periodically by the ship's personnel to determine whether inlets are abstructed by corrosion, paint, dust, or other extraneous condition. Smoke tests should be made in all holds and the operation of the system noted.

Subchapter H.—Great Lakes: General Rules and Regulations

PART 77-PIRE APPARATUS; FIRE PREVENTION

Part 77 is amended by adding a new § 77.01,*1 to immediately precede § 77.1, reading as follows:

§ 77.01 Basis and purpose of regulations. (See § 61.01 of this chapter, which is identical with this section.)

Section 77.17 (c) ** is amended to read as follows:

§ 77.17 Fire-detecting and automatic sprinkling systems. (See § 61.17 of this chapter, as amended, which is identical with this section.)

Subchapter I—Bays, Sounds, and Lakes Other Than the Great Lakes: General Rules and Regulations

PART 95—FIRE APPARATUS; FIRE PREVENTION

Part 95 is amended by adding a new § 95.01.° to immediately precede § 95.1, reading as follows:

§ 95.01 Basis and purpose of regulations. (See § 61.01 of this chapter, which is identical with this section.)

Section 95.16 (c) *7 is amended to read as follows:

§ 95.16 Fire-detecting and automatic sprinkling systems. (See § 61.17 of this chapter, as amended, which is identical with this section.)

Subchapter I—Rivers: General Rules and Regulations

PART 114—FIRE APPARATUS; FIRE PREVENTION

Part 114 is amended by adding a new § 114.01,° to immediately precede § 114.1, reading as follows:

§ 114.01 Basis and purpose of regulations. (See §61.01 of this chapter, which is identical with this section.)

Section 114.17 (c) "1 is amended to read as follows:

§ 114.17 Fire-detecting and automatic sprinkling systems. (See § 61.17 of this chapter, as amended, which is identical with this section.)

(R. S. 4405, 4470, as amended, 49 Stat. 1544, sec. 2, 54 Stat. 1028, sec. 5 (e), 55 Stat. 244, 46 U. S. C. 367, 375, 463, 463a; 50 U. S. C. and Sup. 1275; sec. 101, Reorg, Plan No. 3 of 1946; 11 F. R. 7875)

[&]quot;A notice regarding the proposed changes in the regulations for smoke detecting systems and for the construction or material alteration of passenger vessels of 100 gross tons and over was published in the Federal Register dated September 27, 1946 (11 F. R. 11014), and a public hearing was held by the Merchant Marine Council on October 22, 1946, at Washington, D. C. All the written and oral comments and suggestions were considered by the Merchant Marine Council and where practicable incorporated into the amendments to the regulations.

The amendments to the regulations shall become effective on March 7, 1947.

12 P. R. 808; Feb. 4, 1947.

⁽²⁾ Construction and installation.
(i) The detecting device shall be such that finely divided and diluted particles of smoke shall be readily indicated visually. The lighting arrangement shall be such as not to be disturbing to navigation at night. For new installations on vessels of over 5,000 gross tons or where installations are not made in the wheelhouse or fire control station, this device shall be provided with an audible alarm in the wheelhouse together with an auxiliary audible alarm located in the engine room.

Subchapter M—Construction or Material Alteration of Passenger Vessels of the United States of 100 Gross Tons and Over Propelled by Machinery

PART 144—CONSTRUCTION OR MATERIAL ALTERATION OF PASSENGER VESSELS OF THE UNITED STATES OF 100 GROSS TONS AND OVER PROPELLED BY MACHINERY Part 144° is hereby canceled and

the following regulations are issued in its stead:

Sec.
144.03 Basis and purpose of regulations.
144.05 Procedure for plan approval.
144.07 Definitions.
144.09 Type, location and construction of fire control bulkheads and decks.

144.11 Ceilings, linings, trim, and decorations in accommodation spaces and safety areas. 144.13 Escapes.

144.16 Doors. 144.17 Windows. 144.19 Hetch cos

144.19 Hatch covers and shifting boards.
144.21 Heat and refrigeration insulation.

144.23 Paint,

144.25 Ventilation.

⁰⁷See footnotes 6 and 7 on page 27.

144.27 Furniture and furnishings. 144.29 Alternate materials.

Note: The even numbers have not been used to allow for future expansion, if necessary.

AUTHORITY: §§ 144.01 to 144.29, inclusive, issued under sec. 5, 49 Stat. 1384, and sec. 2, 54 Stat. 1028, sec. 5, 55 Stat. 244, 46 U. S. C. 369, 4634, 50 U. S. C. and Sup. 1275, 46 U. S. C. 1, Reorg. Plan No. 3 of 1946; 11 F. R. 7875.

§ 144.01 Basis and purpose of regulations. By virtue of the authority vested in the Commandant of the Coast Guard under section 101 of the Reorganization Plan No. 3 of 1946 (11 F. R. 7875), section 5 of Act of May 27, 1936, section 2 of Act of October 9, 1940, and section 5 of Act of June 6, 1941 (46 U.S. C. 369, 463a, 50 U.S. C. 1275), the regulations in this part are prescribed for the guidance of builders in constructing new passenger vessels or in making alterations in existing passenger vessels or in converting existing vessels to passenger vessels, showing the safety and fire prevention characteristics which will meet the approval of the Commandant, so that the vessels, when built or altered, as the case may be, can be navigated with safety to those on board.

§ 144.03 Vessels to which applicable. (a) The regulations of this part shall be applicable to the following vessels of 100 gross tons and over propelled by machinery:

(1) New passenger vessels.

(2) Existing passenger vessels upon which material alterations are to be performed.

(3) Existing vessels being converted to passenger vessels.

Procedure for plan ap-\$ 144.05 Triplicate copies of general proval. contract plans and specifications and of all other matter of a similar nature for all vessels shall be submitted through the Commander of the Coast Guard District in which the work is to be carried out, or of the District in which the design is being prepared If the place of building or conversion has not been decided upon, to the Commandant of the Coast Guard for his approval before the construction or material alteration shall be commenced, to enable him to determine that any such vessel or vessels, when

This space Adjacent to this space	Control stations	Stairways and alevator enclosures	Corridors	Lifebool embarkation or lowering stations	Staterooms and all publicspaces with incombustible turnishings, veneers, trim, drapes, rugs, etc.	Statenooms and public spaces under 500 square feet with incombustible furnishings	Public spaces from 600 square feet to 3,000 square feet with incombusti- ble furnishings	Public spaces over 3,000 square feet with incombustible furnishings	Staterooms and public spaces under 500 square feet with combustible furnishings and isolated storemouns	Public spuces from 500 square feet to 3,000 square feet with combustible farmishings	bust	Washrooms, tollet spaces and leclated pantries with incombustible filtings	Galloys, main pantries, storerooms and workshops	Motion-picture booths and Mm	Machinery spaces	Fuel tanks	Isolated fan rootus	Cargo spaces and cargo oil tanks	Water lanks and voids	Open decks and enclosed premandes (not safety area) :
ontrol stations tairways and elevator enclosures Cartidors Moboat erabarkation or lowering stations.		Δ-0	A-0	A-0	4-0	Л-60 А-60 А-0 А-0	A-60 A-60 A-0 A-0	A-00 A-00 A-0 A-0	A-60 A-60 A-0	A-60 A-60 A-0 A-0	A-60 A-60 A-0 A-0	A-0 A-0 A-0 A-0	A-60 A-60 A-0 A-0	A-60 A-60 A-30 A-0	A-60 A-0	Λ-60 Λ-60 Λ-0 Λ-0	A-15 A-0	A-60 A-60 A-0 A-0	A-0 A-0 A-0	
taterooms and all public spaces with incombustible furnishings, voncers, trim, drapes, rugs, etc. staterooms and public spaces under 500 square feet with incombustible furnish-			11 / 11	11.5		1	1		100	A-16						7.4			A-0	A-
ings. hbild spaces from 500 square feet to 3,000	******				*****	A-30			20.00	A-60	1017			A-60						
square feet with incombustible furnish- ings. "ubite spaces over 3,000 square feet with incombustible furnishings.							-	A-60	100	100	100			A-60	75	7 0		0.00	100	2.4
square feet with combustible furnish- square feet with combustible furnish- lugs and isolated storerooms. Public spaces from 500 square feet to 3,000			545					•••••	A-60	A-00	A-60	A-0	A-60	A-00	A-60	A-60	A-0	A-(0)	A-0	
Public spaces over 3,000 square (set with										λ-60	A-60	A-0	A-60	A-60	C - 1	12.0	1	A-60		10
Vashrooms, tollet spaces, and isolated												A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A
calleys, main pantries, storerooms and workshops. dotlon picture booths and film lockers. dachinery spaces. roel tanks. solated fan rooms. aryo spaces and cargo oil tanks. Vater tanks and voids.	*****		*****	****	*****	*****	*****		*)115-11	*****	20,000	SPECE.	*****	•••••	A-0	A-0	A-0	A-0	4440	AAAA
Open decks and enclosed promenades (not salety area)							*****				******								A-0	A C

FIGURE 144. 09 (d) .- Bulkheads forming part of a main vertical tone bulkhead.

built or altered, as the case may be, can be navigated with safety to those on board. In case the Commandant shall disapprove such plans and specifications, the person or persons submitting the same will be apprised thereof, together with the reasons for such disapproval, and advised of the amendments necessary to secure such approval. After the plans and specifications have been approved by the Commandant, no changes or alterations shall be made therein unless resubmitted in accordance with the procedure above outlined and approved by the Commandant.

§ 144.07 Definitions. (a) "Safety areas" will be considered as including the following spaces:

 Control stations, i. e., those spaces in which a continuous watch is maintained and in which navigating, radio, or fire control equipment is located.

(2) Passenger and crew stairway and elevator inclosures.

(3) Passenger and crew communicating corridors.

(4) Open decks and inclosed prom-

enades in way of lifeboat embarkation or lowering positions.

(b) "Accommodation spaces" will be considered as including the following spaces:

(1) Public spaces, including halls, dining rooms, mess rooms, lounges, cafes, salesrooms, and other similar spaces normally accessible during the voyage.

(2) Staterooms, including passenger and crew rooms, barber shops, beauty parlors, offices, dispensaries, etc.

(3) Washrooms and tollet spaces, both public and private.

(4) Isolated lockers and small storerooms.

(5) Isolated serving pantries, etc., with incombustible furnishings.

(c) "Service spaces" will be considered as including the following spaces:

(1) Motion picture booths and film lockers.

(2) Galleys, main pantries, and storerooms, including working alleyways and stairs, not necessarily inclosed, for the exclusive use of such spaces. (3) Work shops, laundries, mail and baggage rooms, etc.

(d) "Machinery spaces" will be considered as including the following spaces:

(1) Main and auxiliary machinery spaces, including trunks and casings, fuel oil filling stations, and working alleyways, gratings, and stairways, not necessarily inclosed, for the exclusive use of these spaces.

(2) Fuel tanks.

(3) Isolated fan and resistor rooms containing ventilation or air conditioning machinery, resistors, etc., only.

(e) "Cargo spaces" will be considered as including the following

spaces:

 Cargo holds and trunks, both accessible and inaccessible and including refrigerated cargo spaces and cargo oil tanks.

(f) "Miscellaneous spaces" will be considered as including the following

spaces:

(1) Water tanks and voids.

(2) Open decks and inclosed promenades except in way of lifeboat embarkation and lowering positions.

This space Adjacent to this space	Control stations	Stairways and elevator enclosures	Carridors	Lifeboat emborkation or lowering stations	Staterours and all public spaces with incombustible furnishings, vencers, trim, drapes, rugs, etc.	Staterooms and public spaces under 600 square feet with incombastible furnishings	Public spaces from 500 square feat to 3,000 square feet with incombustible formishings.	Public spaces over 3,000 square feet with incombustible furnishings	Staterooms and public spaces under 500 square feet with combustible furnishings and Isolated storerooms	Public spaces from 500 square feet to 3,000 square feet with combustible furnishings	Public spaces over 3,000 square foot with combustible furnishings	Washrooms, tollet spaces and isolated pantries with incombustible fit- tings	Galleys, main pantries, stororooms and workshops	Motton-picture booths and film lock- ers	Mactinery spaces	Fuol tanks	Isolated fan rooms	Cargo spaces and cargo off tacks	Water tanks and voids	Open docks and enclosed premenades (not safety area)
Control stations tali ways and elevator enclosures corridors dictions and alevator of lowering stations.		C	A-0	A-0 A-0	A-15 A-0 B-0 A-0	A-30 A-30 B-0 A-0	A-60 A-60 A-0 A-0	A-60 A-60 A-0 A-0		A- 60	A-60 A-60 A-0		A-60 A-60 A-0 A-0	A-30 A-15 A-15	A-60	Λ-60 Λ-60 Λ-0 Λ-0	A-0 A-0	Λ-60 Α-60 Α-0 Λ-0	A-0 A-0	44 44 C
lateroous and all public spares with incombustible furnishings, veneers, trim, drapes, rugs, etc. isterooms and public spaces under 500 square feet with incombustible furnish	14.1		-	15	10.0	B-0	A-18		E.3				A-15	A-15	A-15	A-0	A-0	A-15	A-0	Δ-
ublic spaces from 500 square feet to 3,000	****		****			B-0	A-15	A-30	B-15	A-30	A-60	B-0	A-30	A-15	A-30	7-30	Λ-0	Λ-30	A-0	A-
square feet with incombustible furnish- ings Public spaces over 2,000 square feet with				1 - 1 - 1			A-30	A-30	A-30	A-30	A-60	B-0	A-60	A-15	A-60	A-60	A-0	A-60	A-0	A-
incombustible furnishings				****	-149.01			A-60	A-60	A-60	A-60	B-0	A-60	A-15	A-60	A-60	A-0	A-60	A-0	A-
daterooms and public spaces under 500 square feet with combustible furnishings and isolated storerooms. "ablic spaces from 500 square feet to 3,000 square feet with combustible furnishings feet with combustible furnishings."		(res		14491		1001	*****	799746	B-16	Λ-30	A-60	B-0	A-60		70	A-60	13		10	A-
ings. Public spaces over 3,000 square feet with				1000	11111	-	hieres		ener	A-30	2.00	100	A-60	120/21	1	A-60	1		15.50	A-
combustible furnishings Vashrooms, tollet spaces, and isolated				199		-	*****	*****			A-60	1.00	A-60	75.0	0.81	A-60	1	A-50		A-
pantries with incombustible fittings	1000			Time		*****	1-3-1-0	V-2- /-	1000	*****	1000	C	A-0	A-0	A-0	A-0	A-0	V-0	100	A-
workshops. Jotlon picture booths and flim lockers Jachinery spaces	1111					2				*****				A-)5	A-14	A-0 A-15 A-0	A-15	A-0	A-0 A-0 A-0	A. A.
Fuel tanks soluted fan rooms Cargo spaces and cargo oil tanks									*****	F		*****			221		C	A-0	A-0 A-0	A-A-
Water tanks and voids Den decks and enclosed promenades (not safety area).	1		1		1		1.					1	1	1100		1		*****	A-0	C

- (g) A "standard fire test" is one which develops in the test furnace a series of time-temperature relationships as follows:
 - 5 minutes—1,000° F. 10 minutes—1,300° F. 30 minutes—1,550° F. 60 minutes—1,700° F.
- (h) "Main vertical zones" are those sections, the mean length of which does not exceed 131 feet, into which the hull and superstructure are required to be divided by fireresisting bulkheads.
- (i) "Horizonta) zones" are those sections which are bounded by the main vertical zone bulkheads, the shell, and by any two decks or by a tank top and an adjacent deck, where such decks are intact to shell and bulkheads.
- (j) Where the term "steel or other equivalent metal" is used in this part, it is intended to require a material which, by itself or due to insulation provided, has structural and integrity qualities equivalent to steel at the end of the applicable fire exposure.
- § 144,09 Type, location and construction of fire control bulkheads and decks. (a) The hull, structural bulk-

heads, decks, and deckhouses shall be constructed of steel or other equivalent metal construction of appropriate scantlings.

- (b) The hull and superstructure shall be subdivided by suitable structural steel or other equivalent metal bulkheads into main vertical zones, the mean length of which shall not exceed 131 feet.
- (c) All bulkheads and decks shall be classed as A-60, A-30, A-15, A-0, B-15, B-0, or C, depending upon the type of space on each side of the bulkhead or above and below the deck.
- (1) Bulkheads or decks of the "A" Class shall be composed of steel or equivalent metal construction, suitably stiffened and made intact with the main structure of the vessel, such as shell, structural bulkheads, and decks. They shall be so constructed that, if subjected to the standard fire test, they would be capable of preventing the passage of flame for one hour. In addition, they shall be so insulated with approved structural insulation, bulkhead panels, or deck covering that the average temperature on the unexposed side would not rise more than 250 degrees F. above the original

temperature, nor would the temperature at any one point rise more than 325 degrees F. above the original temperature, within the time listed below:

Class A-60—60 minutes. Class A-30--30 minutes.

Class A-16—15 minutes. Class A-0-0 minutes (), e., no insulation requirements).

(2) Bulkheads of the "B" Class shall be constructed with approved incombustible materials and made intact from deck to deck (or to ceiling, as provided in paragraph (h) of this section) and to shell or other boundaries. They shall be so constructed that, if subjected to the standard fire test, they would be capable of preventing the passage of flame for onehalf hour. In addition, their insulation value shall be such that the average temperature of the unexposed side would not rise more than 250 degrees F. above the original temperature, nor would the temperature at any one point rise more than 325 degrees F. above the original temperature, within the time listed below:

Class B-15-15 minutes. Class B-0-0 minutes (i. e., no insulation requirements).

This space above	Control stations	Stairways and clevator enclosures	Corridors	Lilebont embarkation or lowering	Staternous and all public spaces with incombustible furnishings, veneers, trim, drapes, rugs, etc.	Staterooms and public spaces under 500 square feet with tacombustible furnishings	Public spaces from 500 square feet to 3,000 square feet with incombusti- ble furnishings	Public spaces over 3,000 square feet with incombustible furnishings	De la	Public spaces from 500 square feet to 3,000 square feet with combustible furnishings	Public spaces over 3,000 square feet with combustible furnishings	Washrooms, tollet spaces and isolated partries with incombustible fit-	Galloys, main paratries, storarooms and workshops	Motion-picture booths and film lock- ers	Machinery spaces	Fuel tanks	Isolated fan rooms	Cargo spaces and cargo oil tenks	Water lanks and voids	Open decks and enclosed promondes (not safety area)
Control stations Stairways and clovator enclosures Corridors	A-60 A-15 A-30	4-0	A-30 A-0 A-0	A-0 A-0	A-0 A-0 A-0	A-30 A-0 A-0	A-60 A-0 A-0	A-60 A-0 A-15	A-0	Δ-60 Λ-0 Λ-15	A-60 A-15 A-30		A-0 A-0 A-0	A-60 A-0 A-0	A-0 A-0 A-0	A-0 A-0 A-0	A-0 A-0 A-0	A-0 A-0 A-0	A-0 A-0 A-0	A-0 A-0
Lifeboat embarkation or lowering stations Staterooms and all public spaces with	A-10	A-0	A-0	0	X-0	Ã-0	A-0	A-0	A-0	A-0	A-0	A-0	Ã-0	7-0	%=0	A-0	A-0	A-0	A-0	ĉ
incombustible furnishings, veneers, trim, drapes, rugs, etc. Staterooms and public spaces under 500	A-30	Λ-30	A-16	A-0	A-15	A-16	Δ-15	A-30	A-15	A-30	A-30	A-0	A-0	A-30	A-0	A-0	A-0	A-0	A-0	A-0
square feet with incombustible furnish- ings. Public spaces from 500 square feet to 3,000	A-60	A-30	A-15	A-0	A-15	A-30	A-60	A-00	A-60	A-60	A-60	A-0	A-0	A-60	A-0	A-0	A-0	A-0	A-0	A-0
square feet with incombustible furnish- lags. Public spaces over 3,000 square feet with	A-60	A+60	A-30	A-15	A-16	A-60	A-60	A-60	A-60	A-60	V-90	A-0	A-0	A-60	A-0	A-0	A-0	Λ-0	Α-0	A-0
Incombustible furnishings	A-60	A-60	A-60	A-15	A-30	A-60	A-60	A-60	A-60	A-60	A-60	A-0	A-0	A-60	4-0	A-0	A-0	A-0	A-0	A-0
square feet with combustible furnish- ings and isolated storerooms	A-60	A -60	A-30	A-15	/:-15	A-60	A-60	A-00	A-60	7-00	A-00	A-0	A-0	A-69	A-0	A-0	A-0	A-0	A-0	A-0
square fect with combustible furnish- ings	A-60	A-60	A-60	A-30	A-30	A-60	A-60	A-60	A-60	A-60	Δ-60	A-0	Λ-0	A-00	A-0	A-0	Δ-0	A-0	A-0	A-0
combustible furnishings Vashrooms, tollet spaces, and isolated	A-60	A-60	A-60	A-30	A-30	A,-60	A-60	A-60	A-60	A-60	A-00	A-0	A-0	A-60	A-0	A-0	A-0	A-0	A-0	A-0
pantries with incombustible fittings	-	A-0		A-0	Λ-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	P	A-0	A-0	A-0	A-0	A-0
workshops Motion picture booths and film lockers Machinery suspens	A-60	4-50	1.50	A-30 A-60 A-30	A-30		A-60	A-60 A-60	A-60		A-60 A-60		Λ-60 Λ-60	A-60 A-60	AHIO	A-(#)	A-60 A-60	A-60 A-60	A-0 A-0	A-0 A-0
Machinery spaces. Tuel tanks solated fan moms	A-15	A-0	A-0	A-0	A-0	A-00	A-60	A-60	A-60 A-0	A-60 A-0	A-60	A-0 A-0	A-0 A-0	A-60 A-60	Λ-0 Δ-0	A-0 A-0	A-0 A-0	A-0	A-0 A-0	A-0 A-0
Cargo spaces and cargo oil tanks	1.4-190	A-00	A-00	14-30	V-90	A-60 A-0	A-60 A-0	A-00 A-0	A-60 A-0	A-60	A-60 A-0	A-0 A-0	A-0	A-60		A-0 A-0	A-0	A-0	A-0	A-0
(not safety area)	A-0	A-0	A 0	0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	O

- (3) Class C bulkheads or decks shall be constructed of approved incombustible materials, but need meet no requirements relative to the passage of flame nor the limiting of temperature rise.
- (d) The minimum requirements for the bulkheads between the various spaces, where such bulkheads form the boundaries of main vertical zones, shall be as noted in Figure 144.09 (d).
- (e) The minimum requirements for the bulkheads between the various spaces, where such bulkheads do not form the boundaries of main vertical zones, shall be as noted in Figure 144.09 (e),
- (f) The minimum requirements for the decks between the various spaces, where such decks form the boundaries of stepped main vertical zones, shall be as noted in Figure 144.09 (f).
- (g) The minimum requirements for the decks between the various spaces, where such decks do not form the boundaries of stepped main vertical zones, shall be as noted in Figure 144.09 (g).
- (h) Where ceilings or linings are fitted, "B" Class bulkheads, with the

- exception of those forming passageways, may stop at the ceiling or lining and need not continue to the deck or shell. However, draft stops shall be fitted between the ceiling or lining and the deck or shell such that the maximum fore and aft length of the inclosed space shall not exceed 66 feet.
- (i) Where Class B-15 panels are used, they should be efficiently secured by steel or equivalent metal flanges offering at least ¾ inch coverage of the panel. Other equivalent methods of construction will be specifically approved by the Commandant.
- (j) Any sheathing, furring, or holding pieces incidental to the securing of structural insulation shall be of approved incombustible materials.
- (k) Decks within accommodation spaces and safety areas may have an overlay for leveling or finishing purposes which need not meet the requirements for an approved deck covering. Such an overlay will not be considered as giving any insulating value and may not in general exceed % of an inch in thickness. Greater thicknesses may be specifically approved by the Commandant for specific locations.

- (1) Rugs and carpets may be used in addition to any deck covering or overlay installed. Rugs and carpets used in stairways or corridors shall be of wool, or other materials having equivalent fire-resistive qualities.
- (m) Overlays within surgical operating rooms shall be of a type which is acceptably conductive in nature to prevent static discharges when heavy concentrations of ether may be present in the air.
- (n) Decks in washrooms and toilet spaces, service, cargo, and machinery spaces, and open decks may have an overlay in any thickness. This overlay need not meet the requirements for an approved deck covering.
- § 144.11 Ceilings, linings, trim, and decorations in accommodation spaces and safety areas. (a) Ceilings and linings and any furting incidental to their erection shall be of approved incombustible materials.
- (b) Class B-15 bulkhead panels may have a combustible veneer on each side not exceeding % of an inch in thickness. However, combustible veneers shall not be used in passageways or stairway inclosures.

This space above———— This space below	Control stations	Stairways and elevator enclosures	Соттідого	Lifebout embarkation or lowering stations	Statomorns and all public spaces with Incombustible formishings, vencers, trim, drapes, rugs, etc.	Staterooms and public spaces under 500 square feet with incombustible lurnishings	Public spaces from 500 square feet to 3,000 square feet with incombusti- ble furnishings	Public spaces aver 3,000 squere feet with incombustible furnishings	Staterooms and public spaces under 500 square (et with combustible furnistings and Isolated storotoms	Publio spaces from 600 square feet to 3,000 square feet with combustible furnishings	Public spaces over 3.000 square feet with combustible furnishings	Washrooms, tollar spaces and isolated paniries with incombustible fit-tings	Galleys, main pantiles, storocoms and workshops	Motion pleture booths and film lockers	Machinery spaces	Fuel tanks	Isolated (an rooms	Corgo spaces and cargo of lanks	Water tanks and voids	Open decks and enclosed promonades (not safety area)
Control stations	Λ-30 Λ-0		A-15	Λ-0 Λ-0	Δ=0 Λ=0	A-0 A-0	A-18 A-0	A-15 A-0	A-16 A-0	A-30 A-0	A-60 A-15	A-0 A-0	A-0	A-15 A-0	A-0 A-0	A-0 A-0	A-0 A-0	Λ-0 Λ-0	A-0 A-0	A-0
Corridors Lifeboat embarkation or lowering stations Staterooms and all public spaces with	A-15		A-0 A-0	A-O	A-0 A-0	A-0 A-0	A-0 A-0	A-15 A-0		A-15 A-0	Δ-30 A-0	A-0 A-0	V-0	A-0	Λ-0 Λ-0	A-0	A-0 A-0	A-0 A-0	A-0	A-(
incombustible furnishings, veneurs, trim, drapes, rugs, etc	A-15	A-15	A-0	1-0	۸-0	A-0	A-0	A-15	A-0	A-15	A-15	A-0	Λ-0	Λ-0	Λ-0	A-0	A-0	A-0	Λ-0	4-
square feet with incombustible furnish-	A-30	4-30	A-15	A-0	A-0	A-0	A-15	A-15	A-15	A-30	A-60	A-0	A-0	A-15	Λ-0	Λ-0	A-0	A-0	1-0	A-0
Public spaces from 500 square feet to 3,000 square feet with incombustible furnish-					J-1		1.500	200	139			37.4		34125		10.10	2012			
Public spaces over 3,000 square feet with	A-60	A-60	V-30	A-15	V-0	Y-30	A-30	A-30	V-60	A-60	A-60	A-0	A-0	A-15	A-0	A-0	A-0	A-0	A-0	A-(
incombustible furnishings Staterooms and public spaces under 500 account feet with combustible furnish-	A-60	A-60	4-60	A-15	A-15	A-30	A-60	A-60	A-60	A-60	A-60	A-0	Λ-0	A-30	A-0	A-0	A-0	A-0	V-0	A-0
lugs and isolated storerooms Public spaces from 500 square feet to 3,000 square feet with combustible furnish-	A-00	A-60	A-30	A-16	A-0	A-15	A-30	Δ-30	A-30	A-60	A-60	Λ-0	A-0	A-15	A-0	A-0	A-0	λ-0	A-0	A-0
ings	A-00	A-60	A-60	A-30	A-15	A-30	A-30	A-00	A-60	A-60	A-60	A-0	A-0	A-30	A-0	1-0	A-0	A-0	A-0	$\Lambda \rightarrow$
Public spaces over 2,000 square feet with combustible furnishings	A-60	A-60	A-60	A-30	A-10	A-30	A-60	A-60	A-60	A-60	A-60	A-0	A-0	A-30	A-0	A-0	A-0	A-0	Λ-0	A-
pantries with incombustible fittings,	A-0	Λ-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	Λ-0	A-0	A-0	A-0	A-0	Δ-0	A-0	A-0	4-
Workshops	A-60	A-60			A-15						A-60		A-0	A-00		A-0	A-0	A-0	A-0	
Motion Dicture Dootes and him lockers	A-60	A-30									A-15		A-15	A-15 A-00		A-16	A-16	A-15 A-0	A-0 A-0	
Muchinery spaces	A-60	A-60 A-60	A-60			A-30		A-60 A-60			A-60 A-60	A-0	A-0	A-60		A-0	A-0	A-0	A-0	
Isolated fan rooms	A-15	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-16		A-0	A-0	A-0	A-0	A-
Cargo spaces and cargo oil tanks	A-60	A-60	A-60	A-30	A-15	A-30	A-60	A-60	A-50	A-60	A-00	A-0	A-0	A-60	A-0	A-0	A-0	A-0	A-0	
Water tanks and voids	A-0	A-0	200	Λ-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	A-0	Δ-0	A-0	1	A-0	Y-0	
(not safety area)	A-0	A-0	A-0	C	A-0	4-0	Δ-0	A-0	1-0	A-0	A-0	A-0	4-0	A-0	A-0	A-0	A-0	V-0	Y-0	O

(c) The total board feet of combustible face trim, moldings, and decorations, including veneers, in any compartment shall not exceed 10% of a figure representing the total square feet of the combined walls and ceiling of the compartment. Such trim, molding, or decorations shall not perform any structural function, and shall not be used in corridors or stairway inclosures.

(d) Any partial bulkheads or decks used to subdivide a space for artistic treatment, privacy, etc., shall meet the requirements of Class C bulkheads.

§ 144.13 Escapes. (a) In each main vertical zone there shall be at least one stairway serving all accommodation and working spaces. Except in machinery spaces, such stairway shall be inclosed so that escape may be made from any deck to the weather or embarkation decks without coming out of the stairway inclosure. There shall also be provided an additional horizontal or emergency vertical escape from each horizontal zone in such spaces.

(b) Stairways and elevators shall be inclosed in "A" Class bulkheads and decks except as noted below:

(1) A stairway or elevator serving only two decks need not be inclosed provided the integrity of the deck is maintained by proper bulkheads or doors at one level.

(2) Stairways may be fitted in the open in a public space provided they lie wholly within such space. However, such stairways may not serve as one of the required means of escape from such space.

(c) The stringers, treads, and risers of all stairways shall be of steel or equivalent metal construction. Balustrade and trim shall be of approved incombustible materials.

(d) Elevators shall not be considered as one of the required means of

§ 144.15 Doors. (a) Doors shall have certain required characteristics depending upon the type of bulkhead in which it is fitted and the location in which it is used. If it is desired to use decorative doors in addition to the doors specified, they shall be constructed of incombustible materials and shall not interfere with the operation of the required doors.

(b) All doors shall be capable of being opened from either side by one person. In public spaces, stairway inclosures, etc., the door shall open in

the direction of escape.

(c) Doors leading out onto open decks may be constructed of hardwood at least 134 inches thick. Such doors may be fitted with not more than 100 square inches of wire inserted glass retained by a metal glazing bead or angle.

- (d) Doors in the main vertical zone bulkheads and stairway inclosures shall be of the self-closing type, capable of closing against a list of 31/2 degrees. Such doors, except those which are normally closed, shall be of a type which are capable of release from the control station and from a position at the door. The release mechanism shall be so designed as to automatically close the door in the event of disruption to the control system. Holding hooks, or other means of permanently holding the door open not subject to control station release, will not be permitted.
- (e) Doors in bulkheads required to be Class A-60, A-30, or A-15 shall meet the following requirements:
- (1) The doors shall be hollow steel or other equivalent metal construction solidly filled with approved structural insulation capable of meeting the requirements for a Class A-15 bulkhead.
- (2) Doors may be fitted with not more than 100 square inches of wire inserted glass retained by a metal glazing bead or angle.

(f) Doors in bulkheads required to be Class A-0 shall meet the following requirement, except as provided in paragraph (c) of this section:

(1) The doors shall be solid or hollow steel or other equivalent metal construction capable of meeting the requirements for a Class A-0 bulkhead.

(2) Doors may be fitted with not more than 100 square inches of wire inserted glass retained by a metal glazing bead or angle.

(g) Doors in bulkheads required to be Class B-15 or B-0 shall meet the following requirements:

(1) Doors may be constructed of

the following materials:
(1) Hollow steel or other equivalent

metal construction.

(ii) Steel or other equivalent metal frame with ¼ inch thick wire inserted glass panes retained by metal glazing bead or angle.

(iii) Solid hardwood with metal or hard asbestos veneer on both sides. Total thickness to be at least 11/4

inches.

(2) Doors may have combustible veneers on each side not to exceed 2/28 of an inch in thickness, but such veneers shall not be used on the corridor side of a door.

(3) Doors may have vent grilles not to exceed two square feet in area.

- (h) Doors fitted in bulkheads required to be Class C shall be of approved incombustible materials or may be of any of the types required by paragraphs (e), (f), or (g) of this section.
- § 144.17 Windows. (a) All windows shall have steel or other equiva-

lent metal frames. The glass shall be retained by a metal glazing bead or other satisfactory means which will insure the whole structure of the window being fireproof.

(b) Windows or airports opening from accommodation spaces onto safety areas, accessible open decks, or inclosed promenades, and windows within accommodation spaces shall be fitted with wire inserted glass. All other windows and airports may be fitted with clear glass.

§ 144.19 Hatch covers and shifting boards. (a) Wood batch covers may be used between cargo spaces. Hatch covers in other locations shall meet the requirements for deck construction noted in § 144.09 (f) and (g).

(b) Shifting boards in tonnage openings shall be of approved incom-

bustible materials.

§ 144.21 Heat and refrigeration insulation.

(a) Heat insulation on bulkheads, decks, and ventilation trunks and any materials incidental to its installation shall be of approved incombustible materials.

- (b) Refrigeration insulation on bulkheads, decks, and ventilation trunks and the materials incidental to its installation need not be incombustible. However, granulated cork which will pass through a ¼ inch mesh, or any other material of equal or greater combustibility, shall not be permitted.
- § 144.23 Paint. (a) An excessive number of coats of paint will be discouraged unless noncombustible paint is used.
- (b) Nitro-cellulose or other highly flammable or noxious fume-producing paints or lacquers shall not be used.
- \$ 144.25 Ventilation. (a) Where automatic fire dampers are required, they shall be designed to operate at 165 degrees F. and shall be made accessible by means of a hinged or bolted plate in the duct. The damper and the portion of duct containing the damper shall be constructed of at least 1/2 inch steel plate suitably stiffened. No insulation need be applied to damper.

(b) Where ventilation ducts are required to meet bulkhead requirements, the space within the duct shall be considered to be the same as the space served by the ventilator, and the duct shall be insulated to meet the applicable requirements of § 144.09

(d) and (e).

(c) All ventilation systems shall be designed, where practicable, so that all ducts leading to the various inclosures are kept within the main vertical zones. No duct may serve spaces in more than one main vertical zone.

(d) Where of necessity ducts pass through main vertical zone bulkheads, automatic fire dampers shall be fitted adjacent to the bulkhead. The duct between the bulkhead and the damper shall meet the applicable bulkhead requirements.

- (e) Ventilation ducts serving cargo or machinery spaces which pass through accommodation spaces or safety areas shall be fitted with an automatic fire damper adjacent to the point of entry. Between the bulkhead or deck and the damper, and in addition, on vertical ducts for a distance of six feet above the damper, the duct shall meet the applicable bulkhead requirements.
- (f) Exhausts from galleys shall meet the applicable bulkhead requirements.
- (g) Motion picture projection rooms shall be equipped with mechanical ventilation to the open air to produce a complete change of air every three minutes. The air inlets shall be at the bottom of the space and the mechanical exhaust shall be as near the top as practicable with the exception that a 6-inch duct shall be led directly over the lamp housing of each projector. The ventilation ducts outside the projection room shall meet the applicable bulkhead requirements. Fan motors shall either be kept clear of the path of the exhaust or shall be of the explosion proof type.

(h) Film storage lockers shall have an outlet to the open air with a total area of at least 1 square inch for each 5 pounds of film for which there is storage space. The duct shall meet the bulkhead requirements.

(i) In all ventilation systems, manually operated dampers or other suitable means shall be provided in an accessible location for shutting off the passage of air in the event of fire; however no dampers shall be placed in exhaust ducts from film lockers or

projection rooms.

(1) All electrical ventilating systems shall be provided with means for stopping the motors in case of fire or other emergency. For each system there shall be provided two emergency control stations; for the machinery space ventilation, one of these two stations shall be in the fire control room or wheelhouse, and the second in the passageway just outside the main entrance door leading to the machinery space; for all other ventilating systems one of these two stations shall be in the fire control room or wheelhouse and the second shall be located as distant as practicable, except that the main bus feeding the ventilating sets may be considered as a control point. The stopping of power fans by the master control shall not prevent the restarting of an individual fan at the the fan's local control. Steam powered ventilation systems shall have a remote control for the steam valve located in an accessible location outside the space affected by the ventilation system.

§ 144.27 Furniture and furnishings.
(a) Waste paper baskets shall be constructed of approved incombustible materials and shall have solid sides.

(b) For the purpose of this part, rooms containing incombustible furniture will be considered as those rooms in which all case furniture such as desks, wardrobes, dressing tables, bureaus, dressers, etc., is constructed entirely of incombustible materials, and all free standing furniture such as chairs, tables, sofas, etc., is constructed with frames of incombustible material. Upholstery, drapes, etc., may be of combustible materials in such spaces.

(c) No combustible furniture or furnishings may be installed in corridors

or stairway inclosures.

§ 144.29 Alternate materials. In any case where it is shown to the satisfaction of the Commandant that the use of fire retardant materials required by §§ 144.09 to 144.27. Inclusive, for the construction or material alteration of any vessel is not reasonable nor practicable, the Commandant may permit the use of alternate materials to such an extent and upon such conditions as will insure, to his satisfaction, a degree of safety consistent with the minimum standards set forth in this part.

Dated: January 24, 1947.

ISEALI MERLIN O'NEILL, Rear Admiral, U. S. Coast Guard, Acting Commandant.

(F. R. Doc. 47-917; Filed. Feb. 3, 1947; 8:50 a. m.; F. R. Feb. 4, 1947, 12 F. R. 808 l

Navigation And Vessel Inspection Circular No. 77

Requirements for motorboats operated for pleasure and commercial fishing purposes

- This circular supersedes and cancels Navigation and Vessel Inspection Circular No. 73.
- 2. In the interests of safety, the United States Coast Guard desires to acquaint all owners and operators of motorboats operated for pleasure and commercial fishing purposes, with the Federal law and regulations governing their equipment, operation, and statutory requirements affecting their numbering and recording.

 The latest laws affecting motorboats are contained in an Act of Congress dated April 25, 1940, which superseded the Motorboat Act of 1910. Regulations required for the proper administration of this act have been prepared by the United States Coast Guard. Prior to issuing these regulations, the cooperation of yachtsmen, yacht and boat builders, and manufacturers of boating equipment was solicited. The regulations, therefore, have been formulated for the safety of the boating public by practical men who represent both the Government and the industry, and the operation of motorboats in compliance with these regulations should not be found burdensome. Those features of the old act which had been so considered. have been eliminated.

4. Given below is a brief digest of the more important features of the Motorboat Act of April 25, 1940, and the regulations issued thereunder.

A. Fines or penalties will not be incurred for failure to carry the following:

(a) Pilot rules.

(b) Fire extinguishers on outboard motorboats.

(c) Fog bells on motorboats less than 26 feet.

(d) Whistles on motorboats less than 16 feet.

(e) Fog horns on all motorboats. B. Navigation lights.—If lights now installed are those which compiled with the old motorboat law and have the range of visibility required by the new act, they may be continued in use as long as they are in serviceable condition. Lights installed or fitted 6 months after the termination of the national emergency shall be of a type approved by the Commandant.

C. Whistles.—If the whistle on board complies with the audibility requirements of the rules even though not the type of whistle required, it may be continued in service until 6 months after the termination of the national emergency. After that date the specified type is required.

D. Lifesaving equipment.—A life-saving device is required for every person on board. Box-type buoyant cushions will be permitted as life preservers on boats up to 40 feet in length. Life preservers or ring buoys are required for motorboats 40 feet and over. Purchasers of lifesaving equipment should look for the label or stamp indicating that the device is of a type approved by the Coast Guard.

Commercial fishing motorboats—life floats.—Wooden life floats made of light buoyant wood may be used on commercial fishing motorboats. The dimensions of every such wooden life float shall be not less than 4 feet in length, 12 inches in width, and 1% inches in thickness, and the weight shall not exceed 25 pounds. The float

may be made in one or two pieces. If made in two pieces, the pieces shall be securely attached with wooden dowels. No metal shall be used in the construction of the float. It shall be provided with two handholes, one at each side, midway in the length, which handholes shall be not less than 6 inches in length and 2 inches in width, with a margin of at least 1 inch at the edge of the float. Wooden life floats, made of balsa wood, shall not be less than 3 feet in length, 111/2 inches in width, and 2 inches in thickness. The balsa wood used in the construction of such floats shall be of the same quality as required for balsa-wood life preservers. Each two-piece float, in addition to the doweling, shall be securely glued and the dowels shall be four in number, of %-inch diameter made of straightgrained dry hardwood, driven through and entirely across the float through holes bored to slightly less diameter than the dowel.

Ventilation.—All motorboats which are constructed or decked over after April 25, 1940, and which use gasoline or other liquid fuel having a flash point of less than 110° F. shall be provided with ventilation as follows:

(a) At least two ventilators fitted with cowls or their equivalent for the purpose of properly and efficiently ventilating the bilges of every engine and fuel tank compartment in order to remove any inflammable or explosive gases.

(b) The ventilation of the boat is not required where the greater portion of the bilges of the engine and fuel tank compartments is open to the natural atmosphere.

F. Fire extinguishers.-The number of extinguishers listed in the table is required on board. The extinguishers on motorboats, if in good and serviceable condition, may be used until 6 months after the national emergency. Purchasers of fire extinguishers may inquire from the seller if the extinguisher is of a type approved by the Coast Guard. When in doubt, this information may be obtained from the Officer in Charge, Marine Inspection, U. S. Coast Guard in the area where the motorboat is located, or from the Commandant (MVI), United States Coast Guard, Washington 25, D. C.

G. Reckless operation.-Any person who shall operate any motorboat or any vessel in a reckless or negligent manner so as to endanger the life, limb, or property of any person shall be deemed guilty of a misdemeanor and on conviction thereof by any court of competent jurisdiction shall be punished by a fine not exceeding \$2,000, or by imprisonment

for a term of not exceeding 1 year, or by both such fine and imprisonment, at the discretion of the court.

5. From the following table one may readily determine the equipment required on the various classes of motorboats which are operated for pleasure purposes. The failure to have such equipment on board at all times when the vessel is operated, constitutes a menace to safety of life and subjects the owner and vessel to the penalties prescribed by law.

6. Lights for auxiliary motorboats .- Motorboats of classes 2 and 3. when propelled by sail and machinery, or by sail alone, shall carry the colored side lights, suitably screened, but not the white lights prescribed by section 3 of the act of April 25, 1940 (46 U.S.C. 526b): Provided, however, That motorboats of all classes, when so propelled, shall carry ready at hand, a

lantern or flashight showing a white light which shall be exhibited in sufficient time to avert collision: Provided jurther, That motorboats of classes A and 1, when propelled by sail and machinery, or by sall alone, shall not be required to carry the combined lantern prescribed by subsection (a) of section 3 of the act of April 25. 1940

7. Equipment is required for the safety of the persons on board. To be effective it must be in good condition. For proper protection, equipment must not only be on hand but by frequent check it should be ascertained that the equipment is in working order and fully ready for the purpose

for which it was designed.

8. Every undocumented vessel operated in whole or in part by machinery, owned in the United States and found on the navigable waters thereof.

REQUIREMENTS FOR PLEASURE AND COMMERCIAL FISHING MOTORBOATS

Equipment	Class A	Class 1 16 to 26 feet	Class 2 25 to 40 feet	Class 2 40 to 65 feet
	0.10.10.1000	16 16 26 1630	20 10 40 1601	40 to 05 ice.
Combination light	port and green	at showing red to to starboard from 2 points abaft the at least 1 mile.	None	None.
Part side light	None	None	t on port side, proper from right about to 2 Visible at least 1 mile	y screened to show red points abait the beam.
Starboard side light	None	None	1 on starboard side pregreen from right aherbeam. Visible at lea	operly screened to show ad to 2 points abatt the st 1 mile.
Stern light	1 bright white lig	ht aft showing all :	around the borizon. Vis	ible at least 2 miles.
Bow light	None	None	1 bright white light in a from right ahead to on both sides. Visib	fore part of boat showing 2 points abaft the beam de at least 2 miles,
Whistle 1	None	1 hand, mouth, or power-op- erated, au- dible at least ½ mile.	I hand or power- operated andible at least I mile.	I power-operated, au- dible at least I mile.
Bell	None	Nono	1 which produces, when tone of full round cha	n struck, a clear bell-like tracteristics.
Lifesaving devices 2	1 life preserver of person on board	r ring buoy or bu 1.	oyant cushlou for each	Ille preserver or ring buoy for each person on board.
Flame arrestors	I on each carbure motors.	or of all pisoline ca	gines installed after Apr.	25, 1940, except outboard
Ventilation	bilges in engine	and fuel tank con	equivalent capable of a noartments of boats con ner fuel of a flash point le	structed or decked after
Fire extinguishers	tificallon foam extinguisher.	terrachloride or/ or 1 4-pound CO; routboard motor-	2 1-quart carbon let- rachloride or 2 114- gallon fram or 2 4- pound CO ₂ extin- guishers.	3 1-quart carbon tetra- chloride or 3 114 gallon foam or 3 4 pound CO2 extin guishers.

¹ Commercial fishing motorboats may carry any of these specified devices.
2 Commercial fishing motorboats may carry in fleu of this specified equipment prescribed wooden life floats.

except public vessels and vessels not exceeding 16 feet in length, measured from end to end over the deck excluding sheer, temporarily equipped with detachable motors, shall be numbered. The regulations issued by the Commandant under authority of this act clarify the language of the statute to require the following undocumented vessels to be numbered:

(a) All boats equipped with per-

manently fixed engines.

(b) All boats over 16 feet in length equipped with detachable engines.

The following undocumented vessels are not required to be numbered:

(a) Public vessels.

(b) All boats not exceeding 16 feet in length temporarily equipped

with detachable motors.

The words "temporarily equipped with detachable motors" shall be construed to mean those vessels to which the engines are not permanently fixed and to which outboard motors may be clamped or otherwise temporarily fastened and are not bolted or permanently secured. The controlling principle shall be whether or not the vessel has permanently fixed engines rather than the design or construction of the vessel. A boat designed specifically for the use of an outboard motor as the ordinary means of propulsion if not exceeding 16 feet in length, is, nevertheless, exempt from the requirements of the act if temporarily equipped with an outboard motor.

10. Upon the purchase of an undocumented vessel which has been issued a certificate of award of number under the provisions of the act of June 7, 1918, as amended, and after completion of the bill of sale on the reverse side of the certificate by the vendor or the former owner, the purchaser should execute the application for number for undocumented motor vessel, which is incorporated on the reverse side of the certificate of award of number (CG 1513) and surrender the certificate, bill of sale, and application for a new number to the Officer in Charge, Marine Inspection, United States Coast Guard, having jurisdiction over the area in which the vessel is owned, within the statutory period of 10 days. That officer, upon receipt of the certificate with the bill of sale and application properly executed and upon being satisfied with the evi-dence of ownership, will assign a number to the vessel and forward the certificate and accompanying papers to the District Commander for processing. He will at the same time issue to the new owner a letter authorizing the operation of the vessel for a limited period, without the certificate of award of number on board, pend-

ing the issuance of such papers by the District Commander. In the case of such vessels which are new or which have never been numbered under the provisions of the act of June 7, 1918. as amended, or which are operating under the old form of certificate of award of number, application should be made to the Officer in Charge, Marine Inspection, United States Coast Guard, having jurisdiction over the area in which the vessel is owned, for a certificate of award of number by presenting proper evidence of ownership such as a bill of sale, builder's certificate, etc., and by the execution of Form CG 1512, application for number for undocumented motor vessel. Upon the execution of these cards in duplicate and the presentation of evidence of ownership, the Officer in Charge, Marine Inspection, United States Coast Guard, will accept the application and accompanying papers, transmitting same to the District Commander for processing and will thereupon assign a number to the vessel, at the same time issuing a letter authorizing the operation of the vessel for a temporary period under the numbers assigned and pending the issuance of a certificate of award of number by the District Commander. Upon receipt of the certificate of award of number, the number awarded shall be painted or attached to each bow of the vessel and shall be in block characters of good proportion and not less than 3 inches in height, reading from left to right and parallel with the waterline, as near the forward end of the bow as legibility of the entire number for surface and aerial identification permits. The number shall also be of a color in contrast with the color of the hull so as to be distinctly visible and legible.

11. The certificate of award of number must be kept on board at all times (unless in the custody of the commander of the Coast Guard district), except in the case of vessels not exceeding 17 feet in length, or vessels whose design or fittings are such that the carrying of such certificate on board would render it imperfect, illegible, or would otherwise tend to destroy its usefulness as a means of

ready identification.

12. Further information in respect to the laws and regulations applicable to such vessels and for advice concerning the requirements for other vessels engaged in carrying freight or passengers for hire, may be obtained from any Officer in Charge, Marine Inspection. United States Coast Guard, or from the Commandant (MVI). United States Coast Guard, Washington 25. D. C.

13. Officers in Charge, Marine In-

spection, United States Coast Guard, are located at the following ports:

40 Broad Street, Boston, Mass, 76 Pearl Street, Portland, Maine. 409 Federal Building, Providence.

R. I. 42 Broadway, New York, N. Y. 302 New Post Office Building, New

London, Conn. 311 Federal Building, New Haven, Conn.

313 Federal Building, Albany, N. Y. 801 Customhouse, Philadelphia, Pa. 204 Customhouse, Norfolk, Va. 209 Chamber of Commerce Build-

ing, Baltimore, Md.

East Bay and Broad Streets, Charleston, S. C.

Customhouse, Savannah, Ga. Federal Building, Jacksonville, Fla. 202 Customhouse Building, Wilmington, N. C.

Professional Building, Miami, Fla. 406 Federal Building, Tampa, Fla. Customhouse, Canal Street, New Orleans, La.

Courthouse and Customhouse, Mobile, Ala.

Bluestein Building, Port Arthur, Tex.

New Federal Building, Galveston, Tex.

312 Appraisers Store Building, Houston, Tex, 1134 Keith Building, Cleveland,

1134 Keith Building, Cleveland, Ohio,

440 Federal Building, Buffalo, N. Y. 205 Federal Building, Oswego, N. Y. 430 Federal Building, Detroit, Mich. 311 Federal Building, Duluth, Minn. 402 Courthouse and Custom Building, Toledo, Ohio.

Municipal Building, State Street, St. Ignace, Mich.

1102 Customhouse, 610 South Capal Street, Chicago, Ill.

National Bank of Ludington, Ludington, Mich.

533 Federal Building, Milwaukee, Wis.

216 Old Custombouse Building, St. Louis, Mo.

New Post Office Building, Calro, Ill. New Post Office and Courthouse, Dubuque, Iowa.

New Post Office Building, Cincinnati, Ohio.

602 Federal Building, Loulsville, Ky. 322 Customhouse, Memphis, Tenn. 1018 Stahlman Building, Nashville,

Tenn. 1215 Park Building, Pittsburgh, Pa. Post Office Building, Point Pleasant,

Post Office Bullding, Point Pleasant W. Va. Federal Building, San Juan, P. R.

1119 Times Building, Long Beach,Calif.U. S. Appraisers Bidg., San Fran-

U. S. Appraisers Bidg., San Francisco, Calif.

New World Life Building, Seattle, Wash, 1005 Failing Building, Portland,

Oreg.

210 Federal Bullding, Honolulu, T.H.

Federal Building, Juneau, Alaska, J. F. Farley, Admiral, United States Coast Guard, Commandant.

Equipment Approved by the Commandant

By virtue of the authority vested in the Commandant, the following approvals and terminations of approvals are prescribed:

DAVITS

Welin type CA crescent aluminum davit; general arrangement Dwg. No. 3071-2 dated February 8, 1946, altered March 8, 1946; arm and frame detail Dwg. No. 3071-1 dated January 30, 1946, altered October 16, 1946; working load 5850 pounds per arm; submitted by the Welin Davit and Boat Division of The Robinson Foundation, Inc., Perth Amboy, N. J. This approval supersedes the approval published in the Federal Register of August 15, 1946 (11 F. R. 8836), which is hereby terminated. (12 F. R. 362 Jan. 17, 1947.)

Welin type CAB crescent aluminum davit, general arrangement Dwg. No. 3086, dated April 12, 1946; arm and frame detail Dwg. No. 3086-2, dated April 10, 1946, altered October 16, 1946; maximum load of 6500 pounds per arm; submitted by the Welin Davit and Boat Division of The Robinson Foundation, Inc., Perth Amboy, N. J. (12 F. R. 362, Jan. 17, 1947.)

FIRE RETARDANT MATERIAL FOR VESSEL CONSTRUCTION

Hollow aluminum Class B-15 bulkhead panel. Aetna aluminum ship bulkhead, over-all thickness 2", filled with two 1" blankets of 4-pound density BX-4M Rock Wool, Dwg. No. A-1010, dated May 22, 1946, submitted by the Aetna Marine Corp., 61 Broadway, New York 6, N. Y. (12 F. R. 362, Jan. 17, 1947.)

RELIEF VALVES FOR LIQUEFIED INFLAMMABLE GASES

Relief valves for liquefied Inflammable gases for maximum pressure of 250 pounds per square inch; size 1.3136 square inch, type MS-6, Dwg. No. 31-11867B; size 1.5767 square inch, type MS-7. Dwg. No. 31-11868B; size 3.44 square inch, type MS-8 Dwg. No. 31-11869B; manufactured by the American Car and Foundry Co.. 30 Church St., New York, N. Y. These approvals supersede the approvals by the former Bureau of Marine Inspection and Navigation of July 10, 1941, for relief valves for liquefied inflammable gases:

size 1.5764 square inch, type MS-2, Dwg. No. 31-647; size 1.5764 square inch, type MS-3, Dwg. No. 31-646; size 3.4222 square inch, type MS-1. Dwg. No. 31-649; size 3.4222 square inch, type MS-4, Dwg. No. 31-650; size 0.6401 square inch, type MS-5, Dwg. No. 31-651; which are hereby terminated. (12 F. R. 362, Jan. 17, 1947.)

LIFEBOATS

28' x 9.79' x 4.13' Aluminum handpropelled lifeboat with built-in air tanks, 75-person capacity. General Arrangement and Construction Dwg. No. 3112, dated 7 June 1946, submitted by the Welin Davit and Boat Division of The Robinson Foundation, Inc., Perth Amboy, N. J. (12 F. R. 448, Jan. 22, 1947.)

26' x 7.75' x 3.25' metal oar-propelled lifeboat. 40-person capacity, general arrangement Dwg. No. G-389 dated September 6. 1946, and revised October 15, 1946, submitted by C. C. Galibraith and Son, Inc., New York, N. Y. (12 F. R. 362, Jan. 17, 1947.)

TELEPHONE SYSTEMS

Sound-powered telephone equipment, selective ringing, common talking, 17 stations maximum, splash-proof, type Nos. 3, 6, and 8. Dwg. No. 70-523-1. Alt. 0, submitted by Hen-

schel Corporation, Amesbury, Mass. (12 F. R. 362, Jan. 17, 1947.)

WINCH

Welin type BWB horizontal lifeboat winch, general arrangement Dwg, No. 2477N. dated December 13, 1944, altered December 9, 1946, working load 8,600 pounds per drum, 17,200 pounds per winch, submitted by the Welin Davit and Boat Division of The Robinson Foundation, Inc., Perth Amboy, N. J. This approval excludes use of above winch with nested type lifeboats. (12 F. R. 362, Jan. 17, 1947.)

CONDITIONS OF APPROVAL AND TERMINA-TION OF APPROVAL

The above approvals shall be effective upon the date of publication of this order in the FEDERAL RECISTER.

The termination of approval made by this order shall be made effective on the thirty-first day after the date of publication of this order in the Federal Register. Notwithstanding this termination of approval on any item of equipment, such equipment made before the effective date of termination of approval may be used so long as it is in good and serviceable condition. (12 F. R. 362, Jan. 17, 1947.)

ELECTRICAL APPLIANCES

The following list supplements that published by the United States Coast Guard under date of 15 May 1943, entitled "Miscellaneous Electrical Equipment Satisfactory for Use on Merchant Vessels," as well as subsequently published lists, and is for the use of Coast Guard personnel in their work of inspecting merchant vessels. Other electrical items not contained in this pamphlet and subsequent listings may also be satisfactory for marine use but

should not be so considered until the item is examined and listed by Coast Guard Headquarters. Before listings of electrical appliances are made, it is necessary for the manufacturer to submit to The Commandant MMT, United States Coast Guard, Washington 25, D. C., duplicate copies of a detail assembly drawing, including a material list with finishes of each corrosive part of each item.

	Locatio	n apparat	us may be	used	
Manufacturer and description of equipment	Passenger and crew quarters and pub- ile spaces	Ma- chin- ery, cargo, and work spaces	Open decks	Pump- rooms of tank vessels	Date of action
Artistic Lamp Manufacturing Co., Inc., New York, N. Y.				100	
Cargo light, portable, dripproof, 5 100-watt lamps maximum, drawing No. X-5499, alt 3	- X-100	177 mar 1	1.000		12/19/46
Auth Electric Co., Inc. (formerly Auth Electrical Spe- cialty Co., Inc.), Long Island City, N. Y.: Running				1	14777
light tell-tale panel, semi-automatic, cat. No. 596, drawing No. 8446, alt. 0	Contract of			4	1905116
Benjamin Electric Manufacturing Co., Des Plaines, Ill.: Push button, nonlocking, 5 amperes, 125 volts, water-	4	x			12/5/46
proof, cat. Nos.: 8403 and 8874, drawing No. 8483, issue 5 Dayton Manufacturing Co., The, Dayton, Ohio: Lighting factures, nonwatertight:	x	X	×		12/6/46
Illuminated sign, Oyture No. B-5835, 1 25-watt lamp			n 1		
maximum, drawing No. X46172530, alt. 0	x	20012525	Limite	*****	12/17/46
maximum, drawing No. X46D2533, alt. 0	x	********			12/17/46
niaximum, drawing No. 946-C-13, alt. 8 Flexible arm lamp, fixture No. B-5558, I 40-wait lamp	x	*******	1.8	*******	12/30/46
maximum, drawing No. 946-E-37, alt. B. Henschel Corporation, Amesbury, Mass.: Contact maker,	*			*******	12/30/46
general plarm, types B and C, drawing No. 60-017, alt. 7.	X	X	2		1/7/47

	Locatio	n apparat	us may be	used	
Manufacturer and description of equipment	Passenger and crew quarters and pub- lic spaces	Ma chin- ery, cargo, and work spaces	Open decks	Pump rooms of tank yessels	Date of action
Russell and Stell Co., Inc., New York, N. Y.:					
Lighting fixture, waterproof, with reflector, I 500-wait lump maximum, cat. No. 2956, drawing No. B-					10/0/10
6021, alt. 4. Lighting fixture, hand portable, waterproof, with re- flector, less guard, 1 100-watt lamp maximum, cal.	X	x	x		12/6/48
No. 6215-P. drawing No. F-8909, alt. 1.	x		-	*******	12/6/46
Mirror light fixture, type 1.C-14, 2 40-wair lamps maximum, drawing No. 43363, alt. 0. Berth light fixture, type LC-15, 1 40-wair lamp maxi-	3	eretin.		******	12/4/46
mum, drawing No. 43402R, alt. 0. Desk light fixture, type LC-16, 1 60-watt lamp maximum, drawing No. 43526, alt. 0.	*		******		12/4/46
imum, drawing No. 43526, alt. 0	x	· · · · · · · · · · · · · · · · · · ·			12/4/46
maximum, drawing No. 43525, alt. 0	X.				1/3/47
Ceiling light fixture, type LC-19, 4 60-watt lamps maximum, drawing No. 43525, alt. 0 Ceiling light fixture, type LC-13, 1 60-watt lamp maximum, drawing No. 43530, alt. 0	×				1/3/47
form drawing No 43544 alt 0					1/3/47
Spot light fixture, type LC-33, 1 150-watt lamp max- imum, drawing No. 43541, alt. 0. Table light fixture, types L4 & L4X, 2 100-watt lamps				1	1/3/47
Table light fixture, types L4 & L4X, 2 100-watt lamps maximum, drawing No. 43545, alt. 0	x				1/3/47
Chronometer box light, type LC-34, 1 25-watt lamp	1 2 2 1	*********			10000
maximum, drawing No. 42049-R. rev. 10/11/46	N	*********	********	Intrinter	1/3/47
maximum, catalog No. M. C. 634, drawing No. 10634, alt. 1 Bracket or bulkhead fixture, 1 100-watt lamp max- imum, catalog No. M. C. 647, drawing No. 10647,	x	x	×		11/26/16
alt i		x	- 8	Conti	11/20/40
Ceiling or deck fixture, 1 100-watt lamp maximum, catalog No. M. C. 681, drawing No. 10081, alt. 1 Ceiling or deck fixture, 1 200-watt lamp maximum,		x	x		11/26/46
entalog No. M. C. 694, drawing No. 10694, alt. 1	X	x.	×	Same	11/26/40
Ceiling or deck fixture, I 100-watt lamp maximum, catalog No. M. C. 601, drawing No. 10691, alt. I	x	x	x	21313636	11/26/46
Bulkhead fixture, 1 200-watt lamp maximum, catalog No. M. C. 503, drawing No. 10503, alt. 1	x	x	x		11/26/46
Bulkhend fixture, 1 100-watt lamp maximum, eatalog			x		1000
No. M. C. 501, drawing No. 10501, alt. 1. Bulkhend fixture, key, 1 100-watt hamp maximum,		X			11/26/46
Bulkhead fixture, key, I 100-watt hamp maximum, catalog No. M. C. 1504, drawing No. 11504, alt. 1. Deck fixture, with angle reflector. I 100-watt lamp maximum, catalog No. M. C. 7094A, drawing No. 1100-watt lamp maximum, catalog No. M. C. 7094A, drawing No.	×	x	X	********	11/26/46
17094A, alt. 1 Deck fixture, with reflector, 1 100-watt lamp max- froum, catalog No. M. C. 806, drawing No. 10806,	X.	x	x	4-414-1-1	11/26/40
alt. I Deck fixture, with reflector, 1 200-watt lamp max- tuum, catalog No. M. C. 807, drawing No. 10807,	. X	x	x	*******	11/26/40
alt. I. Deck fixture, with reflector, 1 200-watt lamp maximum, catalog No. M. C. 808, drawing No. 10808.	x		×	********	11/26/49
alt. I. Deck fixture, with angle reflector. I 200-watt lamp maximum, catalog No. M. C. 7094, drawing No.	- X	x	x	,,,,,,,,,	11/26/46
17091, alt. 1. Deck or ceiling fixture, key, 1 100-watt lamp maximum, catalog No. M. C. 389, drawing No. 10389,	. X	x	x	********	11/26/16
sit. I Bracket or bulkhead fixture, key, I 100-watt lamp maximum, catalog No. M. C. 390, drawing No.		x	X	*******	11/26/40
IORON, nlt, 1	X	x	x	******	11/20/40
Bulkhead fixture, I 100-watt lamp maximum, catalog No. M. C. 3002, drawing No. 13002, alt. I	. 8	*	×		11/20/46

Certification of Articles of Ship's Stores and Supplies

Articles of ship's stores and supplies certificated from December 25, 1946, to January 25, 1947, inclusive, for use on board vessels in accordance with the provisions of part 147 of the regulations governing explosives or other dangerous articles on board vessels, is as follows:

Sudbury Laboratory, Sudbury, Mass. Aqua-Clear, certification No. 209, Jan-

uary 15, 1947.

Maxial Chemical Co., 33 West Forty-second Street, New York, N. Y. Fusol No. 4, certification No. 210, January 22, 1947.

Rex-Cleanwall Corp., 126 South Murphy Avenue, Brazil, Ind. Rexglo-X, certification No. 211, January 24, 1947.

Rex-Cleanwall Corp., 126 South Murphy Avenue, Brazil, Ind. Rexglo concentrate, certification No. 212, January 24, 1947.

BUOYANT CUSHIONS FOR MOTORBOATS

Approval No. B-358, double cushion No. 1, 14" x 14" x 2", seat, 20 ounces kapok, 14" x 14" x 2", back, 20 ounces kapok, double kapok buoyant cushion, for use on motorboats of Classes A. 1, and 2 not carrying passengers for hire, manufactured by Jurgensen Manufacturing Co., 162 Gates Ave., Brooklyn 16, N. Y.

Approval No. B-359, double cushion No. 2, 14" x 14" x 2", seat, 20 ounces kapok, 14" x 18" x 2", back, 25 ounces kapok, double kapok buoyant cushion, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, manufactured by Jurgensen Manufactring Co., 162 Gates Ave., Brooklyn 16, N. Y. (12 F. R. 362, Jan. 17, 1947.)

Approval No. B-360, 14" x 18" x 2". Style No. 300, kapok buoyant cushlon, 22 ounces kapok, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, Dwg. No. 3000, dated 27 December 1946, manufactured by American Textile Equipment Corp., 3 State Street, New York 4, N. Y.

Approval No. B-361, 12" x 48" x 2", Style No. 400, kapok buoyant cushion, 51 ounces kapok, for use on motorboats of Classes A, 1, and 2 not carrying passengers for hire, Dwg. No. 3001, dated 27 December 1946, manufactured by American Textile Equipment Corp., 3 State Street, New York 4, N. Y. (12 F. R. 448, Jan. 22, 1947.)

CLEANING PROCESS FOR LIFE PRESERVERS

Opera House cleaning process for cork life preservers, submitted by Opera House Laundry, 217 N. W. Everett, Portland, Oreg. (12 F. R. 362, Jan. 17, 1947.)

ITEMS SUITABLE FOR MERCHANT MARINE USE

Acceptable Fusible Plugs

The Marine Engineering Regulations require that manufacturers who desire to have their products approved for marine service shall submit samples for testing from each heat to the Commandant. If the sample fusible plugs pass the test satisfactorily, the manufacturer is notifled and then the plugs may be used on vessels subject to inspection by the Coast Guard. For the information of all parties concerned, a list of approved heats which have been tested and found acceptable during the period ending 15 November 1946 to 15 January 1946 are as follows:

The Lunkenheimer Co., P. O. Box 360, Annex Station, Cincinnati, Ohio. Heat Nos. 264 to 267, inclusive, and Nos. 269 to 271, inclusive.

Merchant Marine Personnel Statistics

MERCHANT MARINE LICENSES ISSUED DURING DECEMBER 1946

DECK OFFICERS

					Mu	ster								(Chle	mat	c							S	econe	I mo	te			
Region	Oc	ean		ast- ise	Gr	ent kes		S. &	Ri	vers	Oc	сап	Co	ist-	Gi La	rat	B. 3	S. &	Ri	vers	00	ean		ast- ise	Gr	est kes	В.	8. & L.	Ri	vers
	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	o	R	0	R	0	R	0	R	0	R	0	R
Atlantic coast	47 5	64 12	1	9 3		6	6	27	3	3 2 12	37 20	8 2	2	3			2	1	4		70 16	9	1	2	-		1			
Pacific coast	18	52		5		3	3	13			23	3	-110	1			1	5			39	10	VEP 1	-11	W100			,	1151	100
Total	70	128	2	17	4	21	10	41	3	17	80	13	2	4	1		3	8	7	4	125	20	1	2			1			1

				Thire	l mate	1			_			PU	lots				Maste	r mat	e		Total	
Oc	ean							Riv	vers					Riv	erx	Unb				Origi-	Re-	Grand
0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R	nat	newat	total
145 23	10 2		1								1 16	53 7	92 12	7 7 20	1 13				****	374 82 38	212 40 57	616 122 95 305
199	18										17		-	4	-	4	3	- 2	diere		-	1, 138
	O 145 23 1 30	O R 145 10 23 2 1 30 6	O R O	Ocean Coast-wise O R O R 145 10 1 23 2 1 30 6	Ocean Coast-wise La O R O R O 145 10 1 23 2 1 30 6	Ocean Coast-wise Great Lakes O R O R O R 145 10 1 23 2 1 30 6	O R O R O R O 145 10 1	Ocean Coast-wise Great Lakes B. S. & L. O R O R O R O R 145 10 1 <td>Ocean Coast-wise Great Lakes B. S. & Riv O R O R O R O R O R O R O R O R O R O R O</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers O R</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes O R O</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes O R O</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes Great Lakes Great Lakes</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & L. O R O</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Rivers Rivers B. S. & Rivers Rivers Rivers B. S. & Rivers River</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers O R<!--</td--><td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Unit O R<td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspect high O R O</td><td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vehigh seas O R O <</td><td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas O R O<!--</td--><td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original O R O</td><td>Ocean Coast-wise Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original newal O R</td></td></td></td>	Ocean Coast-wise Great Lakes B. S. & Riv O R O R O R O R O R O R O R O R O R O R O	Ocean Coast-wise Great Lakes B. S. & Rivers O R	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes O R O	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes O R O	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes Great Lakes Great Lakes	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & L. O R O	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Rivers Rivers B. S. & Rivers Rivers Rivers B. S. & Rivers River	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers O R </td <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Unit O R<td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspect high O R O</td><td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vehigh seas O R O <</td><td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas O R O<!--</td--><td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original O R O</td><td>Ocean Coast-wise Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original newal O R</td></td></td>	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers Unit O R <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspect high O R O</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vehigh seas O R O <</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas O R O<!--</td--><td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original O R O</td><td>Ocean Coast-wise Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original newal O R</td></td>	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspect high O R O	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vehigh seas O R O <	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas O R O </td <td>Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original O R O</td> <td>Ocean Coast-wise Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original newal O R</td>	Ocean Coast-wise Great Lakes B. S. & Rivers Great Lakes B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original O R O	Ocean Coast-wise Great Lakes B. S. & Rivers B. S. & Rivers B. S. & Rivers Uninspected vessels, high seas Original newal O R

ENGINEER OFFICERS

	Ch	lef engir	eer, stear	n	First as	sistant	engineer,	steam	Second	assistant	engineer	, steam	Third	assistant	engince	r, sleatu
Region	Oce	an	Inla	ba	Oce	ណ	Inle	nd	Oe	ean	Inte	bne	Oc	ean	aí	hand
	0	R	0	R	0	R	0	R	0	R	0	R	0	R	0	R
Atlantic coast. Gulf coast. Grent Lakes and rivers. Pacific coast.	63 3 2 17	110 19 3 34	• 1	43 4 23 8	62 11 2 27	19 6 1 10	1 2	7 2 10 3	103 14 2 27	30 8		,	174 27 3 31	18 6		
Total	85	166	0	78	102	36	3	22	146	50		1	235	28		

				Motor	vessels				τ	Ininspec	ted vesse	ls		Totals	
Region	Chief er	ngineer	First as		Second a engir			issistant incer	Chief e	ngineer		stant incer	Orig-	Re-	Grand
	0	R	0	R	0	R	0	R	0	R	0	R	inal	newal	total
Atlantic coast Gulf coast Great Lakes and rivers Pacific coast	37 3 5 8	66 10 6 22	16 3 3 2	17 3 3 4	6 1	7 2 1 2	234 11 1 3	7	3	1			703 74 21 126	325 61 48 101	1, 028 115 69 230
Total	53	101	24	27	31	12	249	11	3	2	4	1	934	538	1.462

ORIGINAL SEAMEN'S DOCUMENTS ISSUED, DURING DECEMBER 1946

Region	Contin- uous dis- churge book	Certifi- cate of iden- tity	A. B., green, 3 years	A. B., green, 9 months emer- gency	A. B., blue, 18 months, 12 months	A. B., blue, 6 months emer- gency 1	A. B., blue, 6 months emer- gency 1		U. S. Mer. Mar. Doc.	Q.M.E.D., 6 months	Q.M.E.D., emergency	Radio oper- ators	Certifi- cate of service	Tapker man	Staff officer	Total
Atlantic coast	2 13 3		41 14 34 23	126 51 76	91 27 84 67	2 2		221 - 80 247 76	1,754 523 1,118	321 90 188 117	129 44 69 30	19 2 6	1,398 472 829 151	10 10 4	68 10 61	4, 180 1, 336 2, 721 661
Total	23		112	260	269	4		624	3, 571	716	272	27	2,850	30	140	8, 898

Unimited.
 Great Lakes, lakes, bays, and sounds.
 Tugs and towboats and freight vessels under 500 tons (miscellaneous).
 12 months deck or 24 months other departments.

Note. - There were no Panamanian Employment Cards issued.

CREW SHORTAGE REPORTS FROM 1 DECEMBER TO 31 DECEMBER 1946

These Reports Submitted In Accordance With Navigation and Vessel Inspection Circular No. 34, Dated 1 May 1943

		Ratings in which shortages occurred												
Region	Num- ber of vessels	Chief mate	Second mate	Third mate	Radio	A blo seamen	Ordi- nary seamen	Chief en- gineer	First en- gineer	Second en- gineer	Third en- gineer	Qualified member engine de- partment	or coal	Total
Atlantic coast	25 13 3 97	1		1 1 6	1	19 6	5 1 2 29		3 1	2 4	ii'	13 3 3 62	3 1 1 67	49 10 242
Total	138	3		9	2	90	37		4	10	12	81	72	320

WAIVERS OF MANNING REQUIREMENTS FROM 1 DECEMBER TO 31 DECEMBER 1946

Authority for These Walvers Contained in Navigation and Vessel Inspection Circular No. 31, Dated 13 March 1943 and Navigation and Vessel Inspection Circular No. 37, Dated 6 July 1943

Region .	Number of ves- sels	Deck offi- cers sub- stituted for higher ratings	Engineer officers substituted for higher ratings	Able sea- men sub- stituted for deck officers	Ordinary seamen substitu- ted for able sea- men	Qualified members of engine de- partment substituted for engineer officers	Wipers or coal passers substituted for qualifi- ed members of engine department	Wipers, coal passers or cadets sub- stituted for engineer officers	Ordinary seamen or cadets sub- situted for deck offi- cers	Total
Atlantic coast. Gulf coast. Pacific coast. Great Lakes.	333 171 124 87	28 II 4	69 22 5	3	538 327 194 173	20 4 3 4	79 48 18 50	1	3 4	744 420 227 227
Total	715	44	96	6	1, 232	31	195	8	7	1, 61

COAST GUARD MERCHANT MARINE ACTIVITIES

District	· Title	City	Stute	Address
lsl	Commander, 1st Coast Guard District Marine Inspection Officer Officer in Charge, Marine Inspection do do	Bostondodo dodo Portigud	Mussachusettsdodododo	1400 Custombonse 1300 Custorohouse 40 Broad St. 76 Pearl St. 400 Federal Bldg.
2d	Commander, 2d Coast Quard District Marine Inspection Officer Officer in Charge, Marine Inspection do	St. Louis do do do Cairo Dubuque Cincinnati Louisville Memphis Nashvillo Pittsburgh Point Pleasant	Missouri. do do lilinois. lowa. Ohio Kentucky Tennessee do Pennsylvanin West Virginia	224 Old Customhouse 210 Old Customhouse 216 Old Customhouse New Post Office Bidg. Post Office and Courthouse 748 Federal Bidg. 602 Federal Bidg. 502 Federal Bidg. 222 Customhouse 1018 Stabhman Bidg. 1215 Park Bidg. Post Office Bidg.
30	Commander, 3d Coast Guard District Marine Inspection Officer. Officer to Charge, Marine Inspection. do do do do	New York	New York do do Connecticut do New York	42 Broadway Do. Do. 302 New Post Office Bldg. 311 Federal Bldg. 313 Federal Bldg.
nb	Commander, 4th Coast Guard District	Philadelphiadod	Pennsylvaniadodo	210 Washington Square, 801 Customhouse Do.
5tb	Commander, 5th Coast Guard District. Marine Inspection Officer. Officer in Charge, Marine Inspection.	NorfolkdododoBaltimore	Virginiadododododo	Box 540, New Post Office Bldg. Do. Do. 200 Chamber of Commerce Bldg.
76h	Commander, 7th Coast Guard District Marine Inspection Officer. Officer in Charge, Marine Inspection do do do do do do	Miami do do Tampa Charleston Savannah Jacksonville	Florida	934 Dol'ont Ride. 500 Professional Bidg. 501 Professional Ridg. 400 Federal Bidg. Rast Bay nod Broad Sts. 295 Custombouse Federal Ridg.
8th.	Commander, 8th Coast Guard-District. Morine Inspection Officer. Officer in Charge, Marine Inspection do do do do do	Now Orleansdo,do Mobile Port Arthur Galveston Houston		3821/4 Custombouse 313 Custombouse Custombouse Court flouse and Custombouse Bluestein Bidg. Now Federal Bidg. 312 Appraisers Store Bidg.
ηЬ	Commander, 9th Coast Guard District. Marine Inspection Officer. Officer in Charge, Marine Inspection. do	Cleveland	Ohiodo do New York do Michigan Minnesota Ohio Michigan Illinois. Michigan Wisconsin	1700 Kehh Bldg. 1114 Kehh Bldg. 1114 Kehh Bldg. 1134 Kehh Bldg. 140 Federal Bldg. 205 Federal Bldg. 205 Federal Bldg. 311 Federal Bldg. 311 Federal Bldg. 1102 Courthouse and Customhouse Municipal Bldg. 1102 Custom House. National Bank of Ludington. 533 Federal Bldg.
10th	Commander, 10th Ceast Guard District Marine Inspection Officer. Officer in Charge, Marine Inspection.	San Juandododo	Puerto Ricododo	Federal Bldg. Do. Do.
ith.,,	Commander, 11th Coast Guard District. Marine Inspection Officer. Officer in Charge, Marine Isspection.	Long Beachdo	Californiadododo	708 Times Bldg. 1119 Times Bldg. Do.
2th	Commander, 12th Coast Guard District Marine Inspection Officer. Officer in Charge, Marine Inspection	San Franciscododo	Californiado	U. S. Appraisers Bldg. Do. Do.
3th	Commander, 13th Coast Guard District. Marine Inspection Officer. Officer in Charge, Marine Inspection.	Scattledodo	Washingtondodo	New World Life Bldg. Do. Do. 1005 Failing Bldg.
14th	Commander, 14th Coast Guard District	Honoluludo.	Territory of Hawaii	210 Federal Bldg. Pier 4. Do.
17th	Commander, 17th Coast Guart District Marine Inspection Officer Officer in Charge, Marine Inspection	Ketchikando	Alaskadodododododo	Federal Bldg. Commercial Bldg. Do. Federal Bldg.

MERCHANT MARINE DETAILS (ABROAD)

Antwerp, Beligum, Bremerhaven, Germany, Cardiff, Wales, LeHavre, France. Loudon, England. Manila, P. I. Marseilles, France, Naples, Italy, Piracus, Greece, Shaughai, China. Trieste, Italy.